

**THE WINSTON CHURCHILL MEMORIAL TRUST OF  
AUSTRALIA**

**Report by - Sue Hides – 1999 Churchill Fellow**

**The Jack Green Churchill Fellowship to study and document guidelines and technologies for the management of surplus dairy calves which could be adapted by the Victorian dairy industry to enhance bobby calf welfare and to improve the quality and yield of bobby calf veal.**

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## INTRODUCTION

This fellowship provided the opportunity to examine the management and welfare of calves surplus to dairy industry requirements. It also provided to opportunity to examine and compare welfare standards and attitudes to animal welfare in many developed countries. Farms, farming organisations, agribusinesses, government departments, universities, veterinary practices, animal welfare groups and animal rights groups were visited in New Zealand, USA, Canada, Belgium, Brussels, Netherlands, Denmark and the United Kingdom.

There is an emerging social concern about the wellbeing of farm animals and animal welfare is ranked as one of the three major challenges facing agriculture, the others being environmental protection and food safety.

The challenge is to find the middle ground in the area of farm animal wellbeing, (specifically surplus dairy calves in this study), and to do something meaningful to improve the current situation. The management of surplus calves on farms, at saleyards, abattoirs and during transport has the potential to become an issue of concern in the community. These issues need to be dealt with pro-actively and rationally, before they reach public attention where often extremes prevail with animal advocates often demanding an end to animal agriculture and agribusiness proclaiming that welfare is not an issue.

The way animals are managed will eventually impact on the saleability of animal products. We need to be clean, green **and animal friendly**.

Our pasture based systems in southern Australia provide huge advantages in terms of welfare of grazing animals. Good husbandry together with open space provide us with a marketing advantage not enjoyed by most of the countries visited, where dairy cattle are housed.

Generally welfare standards in Victoria compared very favourably to the countries visited. However poor management practices must be identified and improved and good management practices promoted and rewarded, to allow us to continue to build an international reputation for high standards of animal welfare and create marketing advantages.

I am indebted to the Winston Churchill Memorial Trust for providing this opportunity, to my family, especially my mother, Lorna Hides, who cared for my family in my absence and my husband Michael Larcombe who supported the process from application to travel, to the Department of Natural Resources and Environment, especially Dr Kit Button who took on my duties during my absence and finally to the numerous farmers, scientists, business men and women, public servants, veterinarians and students who graciously and enthusiastically gave of their knowledge and experience.

## EXECUTIVE SUMMARY

Sue Hides  
Senior Veterinary Officer Gippsland  
Department of Primary Industries  
PO Box 335  
MAFFRA 3860  
Phone Work 03 51 470 831  
Home 03 51 482 308  
[sue.hides@dpi.vic.gov.au](mailto:sue.hides@dpi.vic.gov.au)

### Project Description

Study and document guidelines and technologies for the management of surplus dairy calves which could be adapted by the Victorian dairy industry to enhance bobby calf welfare and to improve the quality and yield of bobby calf veal.

Surplus dairy calves presented problems for all developed countries visited. Australia's situation is unique as the majority of calves are slaughtered within their first week of life. Elsewhere a significant number of surplus calves were raised for special fed or grain fed veal or dairy beef. Various schemes for adding value to calves have been promoted in Victoria with none reaching long-term viability. Industry has recently invested in the facilities to process bull beef and this is a growth area in the Victoria beef industry.

Many calf rearing systems present significant challenges. The transportation and co-mingling of colostrum deficient calves from many sources challenges the immune system and calf rearers rely heavily on antibiotics and mortality rates are high. Individual housing of calves, while reducing the spread of disease, prevents social contact. Special fed veal calves are confined for the entire production cycle and kept on slats, they are fearful of any change in routine and require very high levels of management especially during transportation and at slaughter. Value adding does not necessarily improve the well being of the surplus calf.

All countries visited with the exception of the USA had standards for minimum age at transportation, either in legislation or in codes of practice. This standard was set variously between four and seven days of age, however in practical terms the condition of the umbilicus (must be dry and withered) and the ability of the calf to walk unaided were the key criteria for fitness to travel. It appears that many calves were transported within two to three days of birth despite rules that they should leave the property of birth no sooner than seven days of age. Currently there is no reliable method to determine the age of a neonatal calf unless the date of birth is known.

The value of surplus dairy calves was significantly higher in all other countries, when compared to Australian prices, reflecting supply and demand for calves for rearing. Despite the higher value of surplus calves, dairy farmers are predominantly concerned with cow and heifer management.

Increased value of calves did not ensure better management on the property of birth. Generally as demand for calves increased the price increases and quality decreases. Less effort is put into smaller calves because if calves are in good supply, calf growers avoid them and if they are in poor supply calf rearers are forced to buy them if they want to fill their sheds.

Calves that are not reared as replacements have by-product status on many farms in all countries visited. Other industries that rely on surplus calves from the dairy industry have developed education programs for dairy farmers and offered incentives for "conditioned calves" with variable success.

Of the countries visited the USA was the least sensitised to farm animal welfare issues. In most countries, industry has worked with government to develop legislation or codes of practice outlining minimum standards. The animal industries in the USA are reluctant to describe minimum standards for fear that these standards may be legislated, however in response to public pressure the American Veal Association developed a code for special fed veal production.

Animal welfare issues have a high profile in Western Europe. Legislation relating to farm animal management is on the increase in the European Union. In New Zealand, Australia, Canada and the USA welfare legislation is predominantly anti-cruelty, with “accepted” management practices protected or exempt from cruelty laws.

There is an increasing concern that world wide progress with animal welfare standards may be threatened by the World Trade Organisation. The European Union want animal welfare issues to influence trade. Our grazing systems in Southern Australia are animal friendly and provide us with significant advantages over confinement production systems, we should capitalise on these advantages.

Transportation of surplus calves is one of the challenges facing Australia, our vehicles are substandard when compared with other countries, and distances from farm to abattoir can be excessive and high loading densities can prevent calves from lying down.

If semen sexing becomes a commercial reality, the breed and sex of surplus calves can be pre-determined. Market forces will dictate if dairy farmers breed specific dairy cross “surplus calves” for a specialist market, or use small dairy breed bulls, concentrate on ease of calving for cows producing calves surplus to heifer replacement requirements.

Depending on demand and price for surplus calves, it may well be more cost effective to slaughter them on farm soon after birth. Regardless of the value of the calf, it may be more humane for a competent operator to slaughter surplus calves on farm soon after birth to avoid the stress of handling, long distance transport and lairage.

The wellbeing of farm animals is a growing concern to an increasing urban population. This emerging social concern cannot be dismissed as the province of extremists. Animal welfare is an emerging science and is ranked as one of the three major challenges of agriculture in developed countries, the others being environmental protection and food safety. Often extreme opinions prevail when an issue reaches public attention. Bobby calf management is an issue of concern for Australian livestock industries, it must continue to be dealt with pro- actively and rationally.

Government and welfare groups must be encouraged to form partnerships with industry to improve compliance with agreed standards and to improve standards where necessary. Continue with education, build code requirements into quality assurance programs. Encourage industry self-regulation accept that in some areas industry will fail to self regulate and decide when it is appropriate to develop legislation. Ensure any legislation is enforceable and enforced. Seek incremental improvements.

Support industry in seeking opportunities to value add where feasible and economically sound, for example dairy bull beef production, removes bobby calves from slaughter and will ease the pressure on abattoirs at peak calving times.

### **Major recommendations**

#### Current industry performance / survey data

There is a need to put more effort into auditing to define current performance of the bobby calf industry against the code of practice, from farm to slaughter. A well structured and organised national survey is needed. Some attempts have been made to collect survey data on surplus calf transportation times and distances and time between farm gate and slaughter. Some data has been collected on on-farm surplus calf management practices in South Gippsland, Victoria.

#### Calf buyer / handler / transporter / accreditation

There is a need to develop a package that could be used to train or retrain calf handlers. Calf buyers need to comply with the Code of Practice, they must be aware of requirements for selection, handling, holding and transportation. A training package is required that provides this information and information on calf behaviour and physiology and the impact of management on ease of handling, mortality and dressing percentage etc. Often calf handling technique is learnt on the job, many inappropriate handling techniques need to be removed from the repertoire of some calf handlers.

### Euthanasia guidelines

There is a need to prepare euthanasia guidelines for bobby calves for farmers, calf buyers / transporters and abattoirs and to find a cost-effective, safe and humane method of slaughtering calves on farm.

### Drying times of umbilical cords

Currently there is no reliable method to determine the age of a neonatal calf and reliance is placed the dryness of the umbilical cord as an indicator of age. There is a need to determine the distribution of drying times of umbilical cords and to determine if cord dryness is a reliable indicator of age.

### Legislation

There is a need to include some of the bobby calf provisions of the Code of Accepted Farming Practice for the Welfare of Cattle in legislation.

There should be an enforceable penalty for the use of goads on calves. Electric goads are routinely used on surplus calves contrary to the code. Calf handlers make no effort to disguise their use from departmental audit teams. Ban the use of goads and provide an enforceable penalty for their use. Industry has definitely failed to self regulate in this area.

### Transportation

Time in transit and distances travelled can be excessive, calves are not necessarily slaughtered at the closest abattoir. This may well be the major issue affecting calf welfare post farm gate. Work is required to specify calf transport vehicles of the future. Loading densities need to be determined and written into the code. Survey to determine current transit times and distances. Regulate transport times and distances (across state lines if possible). Education for calf transporters is important.

### Processors / procurers

There is a need to audit calf management at abattoirs re calf management on site, distance travelled, arrival and slaughter times. Processors have supported the National Bobby Calf Declaration to help ensure that calves meet minimum standards at the farm gate. Processors now need to be made accountable for their management of calves at abattoirs and in transit to abattoirs. Processors who are contract killing calves for a third party have less incentive to improve calf management at the works.

### Holding facilities

There is a need for code compliance and a penalty for not compliance. Calves are often held in open dirt or concrete yards with no bedding – they quickly become cold, wet and dirty in poor weather. Standards for holding facilities are described in the code.

### On farm slaughter

On farm slaughter is a viable alternative for surplus calves which can be easily defended on humane grounds, but may present problems with public perception and squeamishness.

### Value adding

Support industry in seeking opportunities to value add, for example dairy bull beef production.

### **Implementation in Australia**

A presentation was made to the National Consultative Committee on Animal Science (NCCAW) in April 2001 comparing the use and management of surplus dairy calves in the countries visited and presenting future strategies to better manage and protect the welfare of surplus calves in the future (see appendix 5).

The Animal Welfare Science Centre through a management group comprising representatives from farmer groups, animal welfare groups, teaching and research organisations, commercial companies and government, is preparing a comprehensive welfare audit of the dairy industry. The audit of surplus calf management was the first stage, the audit document is now in its penultimate draft awaiting wider industry sign off. This audit document could provide the tool for defining the current performance of the bobby calf industry against the Code of Accepted Farming Practice for the Welfare of Cattle. As a result of this fellowship, I am a government representative on the management group.

Euthanasia guidelines have been developed and written up in the Victorian Department of Primary Industries Ag Note series and attached here in appendix 2. A less expensive captive bolt gun (the Blitz Slaughter Pistol) manufactured by Jorgen Kuuse in Denmark has been imported and is now available in Australia, see appendix 3 for contact details of the importer.

Preliminary work is currently being undertaken on loading densities of calves during transportation and of lying preferences comparing steel, marine ply and straw bedding.

A study has been completed on the distribution of drying times of umbilical cords which has been submitted to the Australian Veterinary Journal for publication.

A survey of a small number of dairy farms in South Gippsland has been undertaken to determine current on farm management practices for surplus calves, the results of the survey are being compiled.

A video / DVD on "Calf Management - the first week of life" (14 minutes) has been produced for the Department of Primary Industries to present the code requirements, and the reasons for the requirements in images with narration to dairy farmers and other industry personnel. It aims to promote change, where necessary, in calf management practices, especially for surplus calves. The video outlines the principles which ensure a good start to life for calves to be reared, such as dairy heifers, bull beef, dairy cross calves and bobby calves that are intended for sale for slaughter. See appendix 4 for the script and details on availability.

Department of Primary Industries (DPI), the principal agency in Victoria with the responsibility for production animal welfare, is about to develop a concept plan to better integrate animal welfare training and education through (1) targeted animal welfare education within DPI and (2) better integration of targeted animal welfare education and training (addressing major issues) through existing DPI industry programs. The concept plan will identify the most effective strategy for internal and external education and training programs. The major issues that will be addressed include welfare audits and compliance, human animal interactions, transport, handling at abattoirs, design of transport, lairage facilities, welfare assessment and husbandry procedures, public education and ensuring there is a good understanding and quantification of the importance that the community places on various animal welfare issues. I will be a member of the group that develops the project.

Work on issues relating to bobby calf management and welfare is ongoing.

## **PROGRAMME**

### **New Zealand 21 April 1999 – 8 May 1999**

Ministry of Agriculture & Forestry David Bayvel, Trish Pearce  
Ag Research Poukawa Research Station, Mark Fisher, Paul Muir  
Dairy Meats New Zealand Ltd, Daryl MacKenna  
AgriQuality New Zealand, Alan Pearson  
Massey University Animal Welfare Science & Bioethics Centre, Prof David Mellor, Dr Kevin Stafford, Sarah Todd  
Royal NZ Society of the Prevention of Cruelty to Animals, Peg Loague  
Ag Research Ruakura. Lindsay Matthews

### **California 19 – 31 March 2000**

University of California, Davis - Carolyn Stull, Barbara Reed  
Californian Farm Bureau Federation - Ria de Grassi  
Californian Department of Food & Agriculture – Pam Hullinger, Denis Wilson  
Tollennar Holsteins Elk Grove – Jon Tollenaar  
San Luis Obispo - Bill Weitkamp (Dairy Advisor)  
Visala – Tom Schultz (Dairy Advisor Tulare County)  
Rib Arrow Dairy  
Mendez Calf Ranch – Trevor Freitas  
Rancho Viletto  
De Groot Dairy Farm – Ken De Groot  
Guest and Guest Calf Ranch  
Calftch Calf Ranch  
Tulare Veterinary Medical Training and Research Centre – Celeste Borelli, Bill Sischo, C Holmberg, Catharina Berge, Ted Greidanus  
Nagle Veal San Bernardino – Michael Lemler  
Fullmer Cattle Co – Corona – Que Fullmer

### **Colorado 15- 21 April 2000**

Colorado State University Fort Collins – Temple Grandin, Bernard Rollin

### **Canada 4 – 7 May 2000**

Canadian Food Inspection Agency Ottawa – Mervyn Baker, Gordon Doonan  
Ontario Veal Association – Jennifer Haley  
Dairy farm Drumbo Ontario Grant McLaren  
Grober Animal Nutrition – Mike Copper Director of Marketing

### **New York State/ Pennsylvania / Washington DC 4 – 17 May 2000**

Cornell University Veterinary College – Chuck Guard  
Empire Auction Barn - Dryden  
Venice View Dairy Farm  
Ashline Farm Aurora  
McCarr Farms Dairy , King Ferry  
Elkendale Farms Genoa – Barb Patchen  
Pen State University – Lowell Wilson, Dave Wolfgang  
Marcho Farms, Harleysville – Adnan Aydin  
Dorothy Mininger  
American Veal Association - Middletown  
Pennsylvania Beef Council – Paul Slayton - Middletown  
Farm Animal Reform Movement – Alex Hershaft  
Humane Society of the United States Susan Millman, David Kuemnerlee  
Humane Society International – Neil Trent  
United States Department of Agriculture Food Safety Inspection Service– William James, Bob Brewer, Jerry Depoyster, Ron De Haven

**Brussels 18 – 22 May 2000**

Australian Embassy – Albert Cobb (Veterinary Attache)  
European Commission – Andrea Gavinelli

**Netherlands**

Provimi – Paul Veth, Rene de Louw

**Denmark 23 – 29 May 2000**

Lindved Bjarne Hog Lauridsen (Veterinarian)  
Baby Beef Production Unit Jelling  
Thomas Jorgensen's farm  
Danish Agricultural Advisory Centre, Arhus - Jens Yde Blom, Astrid Mikel Jensen, Arne Munk,  
Veterinary School Copenhagen – Carsten Enevoldsen, Jens F Agger, Henrik B Simonsen

**United Kingdom 30 May – 1 July 2000**

Ministry of Agriculture, Fisheries and Food – David Pritchard, Richard Cowan, Garreth Jones. Michael Cross  
Compassion in World Farming – Petersfield Hampshire – Joyce D'Silva  
Meat and Livestock Commission, Milton Keynes – Duncan Sinclair  
RSPCA Horsham – Martin Potter, John Avizienius  
Freedom Foods Horsham, Mike Sharp  
Bristol University – Professor John Webster, Toby Knowles  
Cambridge University - Professor Don Broome  
Tenbury Wells – Andrew Cook – Veterinarian  
Newtown – John Hughes - Veterinarian

## **FINDINGS and OBSERVATIONS**

### **New Zealand**

Of the 1.8 million bobby calves born annually in NZ , 1.3 million are slaughtered within their first week of life, 0.5 million are reared for the bull beef trade.

Surplus calf management is very similar to the Victorian situation with the following exceptions.

Dairy Meats NZ was established over 10 years ago by the NZ Dairy Board to assist farmers in the disposal of cull calves and surplus calves and to increase returns to farmers from these classes of stock. Since that time they have refined the procurement and processing of bobby calves and have concentrated on value adding and export marketing of bobby calf products. Dairy Meats procures and processes, on a contract basis, approximately 75 per cent of the 1.3 million calves at seven works. Dairy Meats have developed a range of select veal cuts which they market under the “Nouveau Veal” brand. Dairy Meats have also developed markets for by-products including blood, bone, all offals and various enzymes extracted from tissues.

Bobby calf prices in New Zealand in the 1998 season were higher than prices paid in Victoria, despite the absence of a domestic market for bobby calf veal in New Zealand and the exclusion of the larger bull calves from the bobby calf to the bull beef trade. Better returns may have been the result of superior marketing and value adding.

NZ has started to overcome the by-product status of the calf through the development of the bull beef trade and Dairy Meats NZ is now focusing on maximising cash return for surplus calves slaughtered in their first week of life through attention to quality, value adding and marketing.

Surplus calves are purchased for slaughter on an “over the hooks” basis, payment is based on quality. Calves are identified to a property of origin through machine readable bar coded ear tags.

A research program has been undertaken at Massey University on the effects of food withdrawal and transport on five the ten day old calves.

Transportation of calves in New Zealand appears to be more sophisticated. Covered trucks are used in poor weather, electric goads are not used, calves are handled gently, not loaded at high densities and are slaughtered at the closest works.

### **USA**

US laws are predominantly focused on cruelty, neglect and abuse situations. Agricultural industry is not of the mind set to have government involved in the development of production guidelines. However, individual publications have been developed by industry and /or academia such as the University of California Cooperative Extension Animal Care Series and the American Veal Association Code for Special Fed Veal Production.

Agricultural industry is wary of change and is reluctant to concede on many welfare issues. Agricultural industry in California has requested education on a range of animal health and welfare issues as a means of reducing the need for regulatory intervention in industry practices, for example, the development and distribution of guidelines on the emergency euthanasia of key farm species.

The assumption that producers of animal products treat their animals well, because they rely on them for their livelihood is labelled by animal rights groups as “the production myth”.

There is room for something like Freedom Foods to exist in the USA , there are affluent consumers who prefer to buy welfare friendly products, however labelling may be misleading.

In California, animal cruelty laws are written under penal code which is enforced by Police, Humane Officers and Animal Control Officers. Humane Officers predominantly involved in animal sheltering

and rehousing and are employed by Humane Societies or Society of the Prevention of Cruelty to Animals (SPCA) which are private, non-profit organisations. Each county must have an Animal Control Officer, primarily involved in stray dog and rabies control. The county may contract the local Humane Society or SPCA to provide Animal Control Officer Services or the Animal Control Officer may sit within different departments at the county level, often in the Police Department or Health and Safety Department. Similar arrangements exist in most other States of the USA.

Traditionally there has not been a good relationship between agricultural industries and Animal Control and Animal Humane Officers. In part due to lack of training for Humane and Animal Control Officers in management and handling of farm livestock. Agricultural Departments have staff who are trained in the management and handling of farm livestock but they have no authority to prosecute under any of the animals cruelty and care statutes. Some groups believe that Departments of Agriculture are too close to agricultural industry and therefore do not necessarily trust them to enforce legislation relating to farm animal management.

The USA cattle industries are facing issues that arise from the management of surplus dairy calves, welfare issues are more likely to be extreme when the calves have little or no commercial value, live calves are sometimes found in “dead haulers” bins. Examples that have received recent media attention include delayed slaughter and high pre slaughter mortality of bob calves at an abattoir at Arizona and inhumane slaughter of calves on a dairy farm in Florida.

The Arizona incident resulted in proposed state legislation that required calves to remain on their property of birth until five days of age, this legislation was subsequently quashed. The incident could have been prevented if existing federal legislation prohibiting delayed slaughter had been observed. The Florida incident resulted in fines of \$28,000.

Most Californian bull calves go into calf ranches for rearing for the feedlot industry, very few enter the bob calf trade, those that do are not suitable for value adding for reasons such as size, conformation etc.

Bob calves can and frequently do leave their property of birth for slaughter within their first 24 hours of life. Travel time is 1-2 hours in California and calves are usually slaughtered on the day of arrival at abattoirs. Young calves are difficult to handle and rough handling at loading and off loading and use of electrical goads is not uncommon.

Colostrum management is a major issue in the management of dairy calves in the USA. In California at best, twenty per cent of calves have good passive transfer of immunity. Powdered bovine serum is routinely fed to calves on arrival at calf ranches, however there is no significant difference in serum Ig G before and after feeding. Anecdotal reports suggest that calves do much better if given a feed of powdered bovine serum, this could be attributed to high protein, electrolytes and other nutrients in the product. Bull calves routinely have a higher mortality than heifers, this cannot be explained by colostrum management alone, but may relate to co-mingling of bull calves from multiple sources.

Calves are procured for value adding on the basis of size and appearance, calf buyers do not pay on body weight.

Fly control is a major issue on calf ranches.

The management of non ambulatory animals (downers) is also a major welfare issue in the USA. Producers can be reluctant to destroy their own livestock and some are trying to recoup some carcass value at the expense of the welfare of the animal.

The USA will have to rely on urban society to force change to improve the welfare of farm animals

### **Californian Farm Bureau Federation (CFBF), Ria de Grassi**

The CFBF is the states largest farm organisation, representing over 85,600 member families in 56 counties. The CFBF is a member of the American Farm Bureau Federation.

The mission of the CFBF is to ensure growth of the rural economy, to protect the farm family and to maintain the natural resources of California.

Issues currently before the CFBF include:

water rights to ensure an affordable and reliable water supply,

environmental protection – supporting land ownership incentives to assist farmers and ranchers protect wildlife, native plant species and other natural resources,

food safety and quality and integrated pest management programs,

OHS issues, availability of adequate labour supply,

elimination of unfair export restrictions and trade barriers and

legislation dealing with pesticides, wetlands, clean air, endangered species and animal welfare.

The CFBF policy on Animal Care is as follows

*“We do not condone the mistreatment of animals.*

*Animals that become permanently incapacitated should be euthanized without delay.*

*We support management practices for the humane care of livestock and poultry as developed through scientific research, industry tested practices, or as set forth in the Animal Care Series: Beef Care Practices, Dairy Care Practices, Sheep Care Practices, Swine Care Practices, Turkey Care Practices, Broiler Care Practices and Egg-type Layer Flock Care Practices, produced by the University of California Cooperative Extension. These practices should be used as guidelines.*

*We oppose attempts to impose restrictions on animal care and handling practices whereby the concerns over the well-being of animals are elevated to the same or similar status as the rights of humans. We oppose any legislation that would pay bounties to complainants.*

*We also support an aggressive, comprehensive, educational program which presents facts of animal and poultry production to the media, producers and the general public and school children.*

*Regulations should not unduly restrict the rights of farmers, distributors, or retainers to hold and sell animals alive. Likewise, the right of individuals to purchase live animals to prepare for food consistent with their personal or cultural beliefs should not be restricted beyond reasonable safeguards relating to the health of the species statewide, humane handling, processing of animals, and ensuring food safety.*

*We support requiring any entity or person seizing aquaculture species, horses, livestock, and/or poultry to first have the recommendation of a veterinarian licensed in the state of California whose professional activities involve the evaluation of the care and commercial production of the species subject to immediate seizure. (Revised 1998)”*

Traditionally the CFBF opposed changes in legislation that would impose restrictions on animal care and handling practices. The farming community and the community in general are adverse to regulation.

CFBF has placed emphasis on dissemination of educational information, for example euthanasia guidelines.

Industry can find it difficult to defend some situations and farming practices but can be reluctant to describe what are acceptable practices for the management of farm livestock species for fear that guidelines may be put into regulation.

### **Californian Department of Food and Agriculture (CDFA), Pam Hullinger**

In 1997 in response to an industry request, CDFA appointed a Staff Veterinarian for Animal Care to work in a proactive educational capacity on a range of animal health and welfare issues as a means of reducing the need for further legislative intervention in industry practices. Often, however work is directed by the issue of the moment.

Members of a specific agricultural industry are more likely to be critical of practices in another agricultural industry that they are not part of, while condoning a particular practice within their own industry.

CDFA works with many groups and individuals, including farmers and animal activists, who have an interest in animal welfare, with the objective of finding common ground and resolving or progressing animal care issues.

### **Cooperative Extension University of California Davis, Carolyn Stull**

Carolyn Stull is currently Extension Specialist Animal Welfare, she has investigated the welfare of special-fed calves in commercial veal facilities. Following a request in 1990 to the University of California by the California Legislature, special-fed veal management systems were evaluated under four parameters including environment and housing, nutrition, health and stress, and behaviour. The legislative bill was withdrawn following the results of the evaluation and no additional legislative bill concerning the production of veal calves has been introduced in California.

### **Tulare County Dairy Industry, Tom Schultz**

The state of California is USA's biggest milk producer and Tulare is the biggest milk producing county in California. Individual cow milk production is about 10 percent higher and herd size is 12 times larger than the national average.

Tulare county produced 22 per cent of the Californian total of 28 billion pounds of milk produced in 1988. The dairy industry generated \$899 million of the \$2.9 billion worth of agricultural products of Tulare County in 1998. With sales of dairy cattle and other dairy related products and by-products in addition to milk sales, the dairy industry is the number one income generator for the county, followed in second to sixth positions by oranges, grapes, beef cattle, alfalfa (lucerne) and plums.

The dairy industry is expanding with some operations transferring from the Los Angeles area and steady growth of local existing farms. Most local dairies are incorporated family units with many being second and third generation farm businesses. Dairy operations are heavily reliant on farm labour from Mexico (approximately 200 cows per labour unit).

Tulare county has approximately 290 dairy herds, with an average herd size of 1,200 cows (including dry cows with, on average, 14 per cent of cows dry at any one time). All animals are housed in corrals equipped with shaded rest areas, many with automated misters to reduce summer heat stress. Liquid and solid manure is recycled to irrigate and fertilise crop land.

Over 95 per cent of the cows are Holsteins, typically 1,400 lbs in body weight consuming an average of 50 lb of dry feed and 25 gallons of water per day. A large part of the feed ration is made up of agricultural by-products, such as almond hulls, citrus and sugar beet peels, cottonseed, waste fruit and vegetables. Many herds are milked three times daily. Average per cow production on Tulare dairy Herd Improvement Association herd test figures is 20,949 pounds (756 pounds butterfat).

The average cow is worth about \$1,200 (US), investment in facilities is about \$3,000 (US) per cow. At least 65 per cent of cows are bred artificially. The average inter-calving interval is 13.5 months. A large number of dairies transfer day old heifer calves to calf ranches where they are reared under contract.

The size of dairies and calf ranches is dictated by acreage of crop land, with a ratio of six cows per acre of land which is double cropped growing wheat in winter and corn in summer. The annual average

rainfall is 8 inches. Effluent management and environment protection are significant issues with significant penalties if effluent is not contained on the farm.

About 20 gallons of water per cow per day are used for washing milking utensils and udder. A typical 1000 cow dairy will have a 1 million cubic foot storage lagoon for recycling water.

Many dairies have manure solids separators enabling undigested fibre to be recycled for corral bedding or composted organic fertilisers and heat exchangers, to transfer heat from milk to partially heat water used for washing milking equipment.

### **Californian Calf Ranches (Custom Calf Raising)**

Calf ranches rear both dairy heifer and bulls calves from day old, heifers are reared on contract for dairies and bulls are reared on contract to the feedlot industry. Colostrum management on the farm of origin is variable, and calf ranches rely heavily on the use of antibiotics and vaccinate for salmonella and respiratory diseases. Bull calf mortality in the first 60 days of life is generally between 10-15 percent, heifer calf mortality is lower, generally about 4% (attributed to better colostrum management at birth).

Average price paid for bulls calves is \$50 (US), in March 2000 the price was \$80.

Calves are crated and fed milk replacer until weaning at approx 60 days, hard feed is provided from day 5 onwards, with a transition feed ration offered in the crates for five days prior to weaning. At weaning calves are grouped and put into corrals (community housing). Bulls are grown out to around 270 - 300 lbs at 110 –115 days of age and shipped to feedlots where they are grown to 1100 lbs at approximately 15 months of age.

Crates are constructed from timber, mostly Douglas Fir, crates provide sufficient room for calves to lie down and turn around.

Most labour is from Mexico ratio of calves to each labour unit is 200-250:1 (a work force of 40 on a 9,000 calf ranch).

### **Mendez Calf Ranches**

#### **Tipton 10,000 calves (all heifers)**

#### **Pixley 9,500 calves (75 % bulls, 25 % heifers)**

Management prefers to move calves from their dairy of origin as soon as possible, preferably before they are 24 hours old. Mendez ranches have three trucks which operate a daily pickup from 20 dairy farm clients, the most distant dairy is 50 miles away. Calves are transported in covered single or double deck trucks that are cleaned daily. During transportation calves have straw bedding and room to lie down. They do not collect calves that are “close to dead”. Their umbilicus is dipped in iodine on day of arrival at the ranch.

All calves are fed a powdered bovine serum as a colostrum replacer/supplement on day of arrival. Liquid milk feeding does not commence until the day after they get powdered bovine serum. Calves are fed milk twice per day with increasing volume until the maximum of 2 quarts twice per day between day 10 and 15.

Mendez Ranches feed whole milk unsuitable for human consumption, from antibiotic treated cows and powdered milk when whole milk is in short supply. The ranches have are two tankers which collect antibiotic contaminated milk at 25cents (US) per gallon, it is pasteurised before being fed to calves. Calves are all nipple fed, nipples and bottles are sanitised between each feeding session, but each bottle may be used more than once per feeding session.

Provision of fresh water is important, the Tipton Ranch recently installed an automatic watering system.

There are approximately 150 crates per row of crates and on average, one row of calves is weaned per day, seven days per week.

#### Vaccination program

Day 1 Salmonella, Infectious Bovine Rhinotracheitis (IBR)/Bovine Virus Diarrhoea (BVD)  
Day 7 IBR/BVD/Parainfluenza Virus (PI)/Respiratory Syncytial Virus (Bovishield)  
Day 25 Salmonella (repeat)  
Day 40 Bovishield

All calves are dehorned, bull calves are not castrated.

Commonly used parenteral antibiotics are tylosin, (Tylan) penicillin, ceftiofur (Excenel), (Nuflor), tilmicosin (Micotil) and gentamycin.

Fortified B complex is given to stimulate appetite at the same time as parenteral antibiotics are administered.

Experienced employees are responsible for the diagnosis and treatment of sick calves. These employees are often referred to as “medicine men”. Examination of the sick calves is mostly visual.

The manager speaks Spanish as 95 per cent of the labour force is from Mexico. The minimum wage in the USA is \$675 (US) per fortnight, labour on this ranch is paid \$850 (US) per fortnight. Staff work nine hours per day from 6am to 7pm with a four hour break from 11am to 3pm), six days per week. Recruitment is by word of mouth and management prefer to employ staff with no previous experience on calf ranches as they are easier to train. The Pixley ranch has 42 staff managing 9,500 calves.

Sulpha drugs and chlortetracycline are routinely added to milk, management advised that they would be hard pressed to run the operation without antibacterials.

Bull mortality is between 10-15 per cent, heifer mortality is 4 per cent. Mortality is highest in July and August, the hottest months, in calves less than 15 days old. Most common cause of death is diarrhoea. Most treatment for scours is based on antibacterials, some electrolytes are used and calves are not generally taken off milk completely.

#### Sanitation of crates

Crates are scraped to remove faecal material and sanitised between batches of calves. Finally lime and water mix is sprayed on crates.

Fly control is a challenge in the summer months, Mendez spray for flies frequently and change fly control chemicals often. Fly bait is laid on the ground in front of pens and they are experimenting with the use of a blow torch to burn flies and maggots under the pens where they congregate.

Pink eye is prevalent in summer.

#### Effluent management.

Cement lanes under calf hutches are flushed weekly. Crops are irrigated with waste water. Corrals are scraped between batches of calves and manure is applied as fertilizer to fields. Environmental standards are rigorous, the number of calves is dependent on the acreage of the ranch.

Mendez Ranches have no problems with animal rights groups.

Smaller calves are not suitable for rearing, they are trucked north for 3 hours for slaughter the day after arrival on the calf ranch. The smaller calves are not fed milk to avoid the risk of antibacterial contamination, however in the summer months they are given electrolyte to keep them alive.

Dead calves are sent to a tallow works and are collected dairy from a point out of public view.

### **Guest and Guest Calf Ranch**

Run 14,000 bull calves, source calves from four calf buyers each of whom have their own routes and dairy farm clients, therefore calves are sourced from a number of different dairies. Current calf purchase price is \$95 (US) (average purchase price around \$50-60 (US)). Calves arrive at day old. Calf mortality is 15 per cent. Bulls are shipped at 275 lbs body weight at four months of age to feed lots in the Imperial Valley.

### **Calftech Calf Ranch**

The ranch was established in 1991, and has 22,000 calves in crates at any one time. Calves are grown on the calf ranch to approximately 270 lbs at 4 months and shipped to feedlots in the Palm Springs and custom slaughtered at 1300 lbs at approximately 16 months old. Calftech targets the fancy end of the domestic meat market.

Colostrum management is a problem, as with other calf ranches visited there is no premium paid for "pre-conditioned" calves (those that have had good colostrum management). Immunoglobulin levels in calves from dairies claiming to practice good colostrum management can be very variable. The manager of Calftech believes that colostrum management is a major problem in California, and probably elsewhere as calves do not appear to get sufficient antibodies, even when they receive colostrum.

Twenty per cent of calves coming into the calf ranch will not finish the program, due either to mortality, destruction on farm or culling. Mortality to sixty days of age is approximately 15 per cent. The limiting factor of the operation is calf health in the first 30 days.

Bull calves are castrated at 20-30 days of age using a knife.

Calftech feeds liquid whey from cheese plants and milk replacer manufactured to their specifications, they do not feed waste milk from cows treated with antibiotics. Milk replacer is medicated.

All employees are on a profit share bonus system which is paid monthly.

Manager believes that the sanitation on Calftech is better than most other ranches but is still not good enough and he would like to be able to afford to spend more in this area.

### **Fullmer Cattle Company – Calf Ranch south of San Bernadino**

Calves on this ranch are fed out of date dairy products from supermarket shelves of Los Angeles. The owner of the calf ranch saw to opportunity to use these products and purchased the company that had the contract to collect and dispose of them.

Calves are sourced from all over the country, calves from more distant states are prepared (fed!) for about four days before transportation, mortality during transportation is between 1-2 per cent.

Overall mortality was eight per cent, the lowest of any calf ranch visited.

### **Veterinary Medical Teaching and Research Centre (VMTRC) Tulare, Catharina Berge, Bill Sischo**

#### **Treatment recording trial and antibiotic resistance monitoring**

Antibiotic use on calf ranches is extensive with antibacterials administered parenterally to sick calves and added routinely to milk in therapeutic doses. There are impressive stores of antibacterials on calf ranches. Antibacterials are sourced under prescription from veterinarians, but the veterinarian is seldom involved in the diagnosis or treatment of an individual animal. Veterinarians can become involved on calf ranches, but usually on a trouble shooting basis where they are involved in post mortem investigations.

In general syndromes are recognised on calf ranches by staff who describe the syndromes in Spanish (most employees are from Mexico) for example:

diarrhoea - chorra  
bloody diarrhoea – sangre  
respiratory distress – pompeo  
dehydration – oyos  
wet mouth – bocca  
upper respiratory disease – snot nose

Ranches then have their own preferred treatment protocols depending on past recommendations and performance of a particular protocol.

VMRTC are undertaking basic research on the dynamics of the antibiotic system in calf ranches in an attempt to determine if there are ways to mitigate antibiotic resistance and the impact on public health, by determining what governs the emergence of resistance, the dynamics of the bacterial population and the effect of farm management practices on antibiotic resistance. They are monitoring antibiotic resistance of bacteria carried by calves from arrival at the calf ranches to slaughter (bulls) or first calving (heifers). The work is ongoing.

The following is a summary of a project on one calf ranch. The project is in two parts:

- a treatment recording trial recording use of antibiotics, health status and colostrum status and
- an antibiotic resistance monitoring trial

The project provides a good demonstration of disease occurrence and the use of antibiotics in the Californian calf ranch system.

The following drugs were used for the treatment of calves on this ranch

Lincomycin – spectinomycin injection for pompeo, snot nose, bocca , sangre  
Oral spectinomycin for chorra  
Enrofloxacin for pompeo, multisystemic disease, severe diarrhoea, second line treatment  
Electrolytes for dehydration

Milk fed to calves is medicated therapeutically as a preventative measure against disease.

Tetracyclines are used until weaning, trimethoprim and sulfadiazine are used in short treatments often in a three days on, three days off, three days on program, use of Neomycin in milk has recently been discontinued

It is very easy to get a cohort of calves the same age on big ranches, calves are easy to observe, sample and treat in their first sixty days in individual crates. Immunoglobulin status is recorded to determine if there is a correlation with disease.

Cohorts have been monitored in summer and winter and monitoring the spring cohort was in progress. The researchers will be looking for seasonal effects.

Disease occurrence as diagnosed by the farm workers was graphed, the record of diarrhoeal disease is likely to be more correct than the graph of respiratory disease as farm workers are less likely to be able to distinguish respiratory distress from stress and dehydration. Farm workers record their diagnosis and any treatments given and the date on cards on individual calf crates.

During a trial period conducted in winter, from the day of arrival on the ranch to day 42, involving a cohort of 150 calves, 78 per cent of the calves were individually treated (in addition to routine medication in milk). In the summer trial on the same ranch 76 per cent of calves had been treated. The most common disease diagnoses were respiratory distress and diarrhoea. Diarrhoeal disease was most intense during the first four weeks, peaking at day 12. Levels of individual calf treatment on this ranch were standard within the industry.

Lincomycin-spectinomycin was most frequently used antibacterial to treat disease of all types. Approximately 58 per cent of calves in the trial received this drug (it was used 247 times). Oral spectinomycin was used on 55 per cent of calves (used 194 times – mainly for the treatment of diarrhoea). Enrofloxacin was used 58 times usually as a second line of treatment for respiratory and diarrhoeal disease. Electrolytes were used relatively infrequently with only 19 treatments, mainly during the first two weeks of life.

Susceptibilities to different antibiotics was monitored in *Esherichia coli*, *Salmonella* species and *Enterococcus faecalis* from faecal samples of 30 calves collected every two weeks starting on the day of arrival on the calf ranch, with additional collections on days three and nine for *Esherichia coli*. From each faecal sample, five strains of *Esherichia coli* and all *Salmonella* isolated were assessed. Relatively few *Salmonella* isolates were found, mainly in incoming day old calves.

Antibiotic susceptibility in *Esherichia coli* and *salmonella* were assessed to the antibiotics amikacin, amoxicillin-clavulanic acid, ampicillin, cephalothin, ceftiofur, chloramphenicol, gentamicin, nalidixic acid, streptomycin, sulfisoxazole, tetracycline, sulfa-trimethoprim.

The serotypes of *Salmonella* isolated were susceptible to all antibiotics on the panel. All *Esherichia coli* isolated from days three and nine were resistant to lincomycin, tetracycline and sulfa-trimethoprim, approximately 50 per cent of isolates were from days three and nine were resistant to spectinomycin.

This may indicate that if diarrhoeal disease on this ranch is due to *Esherichia coli* that the treatment may be compromised and ineffective due to high level of resistance in the target bacteria. The high level of resistance against tetracycline and sulfonamides suggest that antibiotics added to the milk replacers has little therapeutic effect in preventing diarrhoeal disease due to *Esherichia coli*.

#### **Nagle Veal, San Bernadino, Michael Lemner**

Nagle buy cuts and carcasses and prepares them for the food service industry, according to requirements, to supply consumers, predominantly in the Italian and Jewish communities. They use bob veal (described as “drop” calves in the US), formula fed veal (white veal fed liquid diet only until slaughtered at 16-18 weeks) and grain fed veal (pink veal, slaughtered at about 20 weeks). Most formula fed (white) veal comes for the East Coast of the USA. Nagle buys product from abattoirs, they do not procure any calves of their own.

Nagle is a client of a Victorian meat exporter, importing a large volume on bobby calf veal. In March 2000, there was insufficient supply from Victoria to meet Nagles’ demand. The shortage of bob veal in March 2000 was expected to last to May 2000, until Victorian supplies came through from autumn calving dairy cows. Nagle estimated that they imported hind legs and loins and back straps from 400,000 Australian bobby calves in 1999.

Most Californian bull calves go into calf ranches for rearing for the feedlot industry, very few enter the bob calf trade, those that do are not suitable for value adding for reasons such as size, conformation etc.

USDA Food Safety Inspection Service is paying close attention to antibacterial contamination of meat. Dairy farmers are becoming reluctant to sell bob calves that are not suitable for value adding to abattoirs, fearful that calves may have inadvertently received antibiotic contaminated colostrum or milk. Nagle believes that farmers are more likely to dispose of calves on farm, rather than take the relatively low price offered for bobby calves and risk a significant fine if contamination is detected.

Consumers are sensitive to the price of veal, it can reach a point where is it too expensive and they will choose other meat products, such as chicken or pork, chicken is relatively inexpensive in the USA.

The Nagle plant is inspected by a United States Department of Agriculture (USDA) Inspector. Nagle has operated a HACCP program in their plant for the past two years, the program commenced before it became compulsory in January 2000. The HACCP program has been time consuming and Nagle would rather USDA be responsible for product quality, not them! However USDA has the policy that those making the money should be responsible, they are cutting back on inspection and putting more onus management to ensure quality.

**Colorado State University, Fort Collins, Prof Bernard Rollin**

The confinement agricultural industry in the US rests on antibiotics, removal of antibiotics assumes better husbandry practices. Use of antibiotics impacts on food safety and animal welfare (used as a substitute for good husbandry) it can impact on rural communities and on the small farmer by allowing the development of large multinational companies.

To have huge rural industries with only cruelty legislation in place is absurd, welfare regulation in the farm animal industries will save a lot of trouble down the road. New legislation is blocked on the basis that rural industries do not want to be told what to do, they will self regulate – the cost of failure to self regulate may well be high and may eventually result in even more stringent restrictions on animal industries.

How do you get particular groups to see that some regulation is protective? The research community is a good example, they resisted the formation of local animal care committees for years but they now find that if some activist targets them it is no longer their individual fight as their institute and the legal system stand behind what they do if everything is procedurally valid.

We need to change scientific training so that people come out with understanding of the ethical dimensions of what they do in addition to technical knowledge and skills.

How do you get people to change?

Get them to question, people who are doing a questionable activity will often have reservations about it, appeal to their own moral beliefs about animal husbandry. For example, it is easy for Rollin to get cowboys to admit that hot iron branding is questionable and ask for alternatives.

Animal industries are not necessarily economically rational, everyone says that people are driven by economic self interest, that is not always true, a lot of behaviour is down to life style and custom.

There is a problem with animal cruelty legislation and enforcement in the US.

**Traditional social ethics and the treatment of animals**

The cornerstone of traditional animal agriculture was good husbandry, which was based on keeping animals under conditions to which they were biologically adapted and improving these conditions by providing additional food, shelter from extremes of climate, protection from predators and disease etc. Generally if the animals thrived so did the farmers and any harm to the animals was harmful to the farmer. Good husbandry was dictated by self-interest and society did not need laws mandating good husbandry for animals. Normal people cared for their animals: failure to provide food, water, shelter and inflicting pain and suffering was considered irrational and deviant and deserving of punishment, as a result anti-cruelty laws were developed.

The scope of anti cruelty laws is sadistic or deviant behaviour towards animals, not standard agricultural practice. Standard agricultural practice was presumed to self correct (self regulate) because any harm to animals was presumed to be harmful to the farmer.

During the mid twentieth century agricultural productivity increased dramatically. The husbandry associated with traditional agriculture changed significantly. The number of workers in animal industries declined at the same time the number of animals produced increased, less attention was paid to individual animals. Technological advancements have allowed animal environments conducive to increased productivity to be developed, often contrary to the natural environment. Antibiotics and vaccines have overcome disease that would otherwise make confinement and intensification impossible.

Technological advancement allowing confinement has significantly changed the way agricultural animals are managed. Anti cruelty laws which exempt agricultural practice and assume that agricultural practice will be self-regulating (because any harm to animals was presumed to be harmful to the farmer), are increasingly less applicable.

New types of animal suffering result from confinement agriculture including production diseases, less individual attention due to size of operations or small profit margins per animal and physical and psychological deprivation (lack of space, inability to move freely, boredom etc). New concepts beyond cruelty and kindness are needed to discuss the issues associated with farm animal production.

A variety of factors are changing the way modern society thinks about animals. Most of the population now lives in an urban setting and has no direct connection with agriculture. Images of agriculture come from children's farm-yard story books, and often society can be shocked by encounters with the reality of animal production. Media audiences are interested in animals and their use or abuse and media reports can rapidly accelerate public concern about animals. Animals in general have a level of social concern equivalent to disadvantaged groups such as racial minorities, the mentally ill, endangered species etc. Philosophers, scientists and others concerned about animal issues have now articulated currents of thought surfacing in society into a rational framework.

Society has grown increasingly concerned about animal suffering even when the source of suffering is not cruelty, but has grown out of goals such as increased efficiency, productivity and product safety. Society now wishes to constrain how animals can be used, so as to limit their pain and suffering. Since respect for animal nature is no longer automatic as it was in traditional agriculture, society is demanding that this be encoded by law. The emerging ethic accepts that there is a cost to protecting the animals' natures these costs may translate to higher food prices.

This emerging or new ethic, the demand for rights for animals, fills the gap left by the loss of traditional husbandry agriculture with its built in guarantee of protection of fundamental animal interests.

There is evidence for the presence of this new ethic emerging world wide. Traditional uses of animals have been modified in a variety of areas. Zoos now provide environments that meet the needs of animals' natures. Farm animal welfare is a major concern and priority for the European Community. In 1988 Sweden passed a law mandating that the management of animals should be suited to their natures and not based on efficiency alone. Animal use in scientific research in the USA is subject to federal legislation passed in 1985: the history of this legislation is relevant to the issue of farm animal welfare.

The care and use of research animals was left up to the scientific community, as in agriculture, anti-cruelty laws specifically exempted research activities from their scope. Generally animal care issues were given a low priority, assuming that the public would only care about the results of research, not about the animals. By the late 1970's large portions of the public wanted assurance that research animals were not suffering uncontrolled pain and were receiving proper care. The research community wished to continue with unrestricted animal use arguing that constraints would jeopardise the curing of disease.

By that time a group began to discuss legislation that would protect animals without stifling science. Their proposal ensured good science by eliminating variables introduced by uncontrolled stress and pain. After considerable opposition from the research community and animal rights extremists the proposal found its way into legislation in 1985. As a result the right of research animals not to suffer in the course of being used for human benefit was encoded into law, pain and suffering was controlled. It became clear that the concern for research animals superseded human economic considerations and the law did not intend to stop animal use in science but guaranteed that animal suffering was controlled as far as possible.

The view that it is reasonable to use animals in research, so long as the animals' basic interests are protected, can be extrapolated to agriculture. The public wants animal products it also wants assurance that the animals are fit and happy. The media and animal advocate organisations are calling public attention to farm animal welfare issues and are linking animal welfare to environmental and food safety issues.

Agriculture has an opportunity to address welfare problems and to alleviate public concerns about farm animal welfare. The development of confinement agriculture after World War II was driven by the need to produce cheap and plentiful food, no consideration was given to the behavioural or psychological needs of the animals. The public now wants these needs addressed. Industry must be

seen to be aware of the problems and working to solve them. Traditional range agriculture should not be overlooked in this process, especially transportation and handling, management of sick or injured animals and invasive practices (castration, dehorning tail docking etc). Failure to address these issues may result in hasty and uninformed legislation, which at worst could harm producers without benefiting animals.

Canada, the Netherlands, Switzerland, Britain and especially Sweden have worked to make intensive systems “animal friendly”, that is to satisfy animals’ psychological/biological natures and be economically viable. These countries have been more sensitised to welfare issues than the USA since they have experienced a change in public sentiment earlier. Animal welfare friendly agriculture is a viable area of research. The presence of research devoted to improving the welfare of farm animals can blunt the effect of sensational news coverage of abuses associated with animal agriculture, however research must be relevant to public concerns and aimed at alleviating animal suffering , not attempting to prove that it does not exist.

### **Colorado State University, Fort Collins, Temple Grandin, Systems Professor in Animal Science**

Temple Grandin has done so much to improve the quality of life of farm animals and at the same time has given industry the incentive to manage animals appropriately by demonstrating that reduction in stress leads to an increase in quality of the end product. Thirty per cent of cattle and pigs in the USA pass through facilities and equipment designed by Dr Grandin. Her expertise includes areas of animals welfare improvement, causes and correction of injury and bruising, humane stunning methods, handling procedures to reduce stress, she has invented a system to replace shackling and hoisting equipment in Kosher meat plants.

Dr Grandin has identified poor treatment of newborn calves as one of the major animal welfare problems for the dairy industry in the USA. “A survey conducted in New York indicated that 33 per cent of the bob veal calves arriving at auctions were too young to walk. This resulted in calves being thrown and dragged. Some people transported calves in the trunks of their cars...mortality may reach 40 per cent and 10 per cent is considered usual. The dairy industry must stop this abuse. Abuse of such calves is a problem that may require legislation to correct.”

Dr Grandins’ proposed standards for the dairy industry relating to the management of newborn calves are as follows.

Newborn calves must not be sold at an auction or to a calf dealer until

- they are old enough to stand and walk without assistance from a human
- their hair coat and navel are dry
- they have received colostrum (within a few hours of birth) to help fight disease

### **Canadian Food Inspection Agency (CFIA), Ottawa, Mervyn Baker**

In 1997, all of the food inspection functions within Agriculture Canada (now called Agriculture and Agrifood Canada), Department of Fisheries and Oceans and Health Canada were grouped together in a separate agency which is the Canadian Food Inspection Agency (CFIA). The CFIA reports to the Minister for Agriculture.

The Canadian Food Inspection Agency (CFIA) regulates all the common agricultural inputs, including fresh and processed fruit and vegetables, fish, meat, dairy products and eggs. It is also involved in label registration and food safety investigations.

Mervyn Baker is primarily concerned with meat inspection regulation, humane handling of animals at abattoirs and humane slaughter.

There are 1,700 federally registered slaughter establishments in Canada processing between 92-95 per cent of the meat produced and able to export meat. Provincially registered establishments are only able to process meat for domestic consumption within their province.

Bobby veal is not a large business in Canada the majority of male dairy calves are raised for feeder steer production or for milk or grain fed veal. The number of calves slaughtered in Canada as bob

calves is negligible. It is not currently permitted to slaughter calves less than 14 days of age at federally registered slaughter establishments, unless the product is going to be exported.

The prohibition, in some abattoirs, on slaughtering “immature animals” is related to the production of “immature meat”. The benchmark for “mature meat” is set at 14 days of age, meat from calves less than 14 days old is considered immature. There are no age at slaughter restrictions at non-federally registered establishments in some of the provinces including Quebec and British Columbia.

As a result of New Zealand’s interest in exporting bobby veal to Canada, New Zealand demonstrated that meat from calves less than 14 days of age was no different from meat calves over 14 days of age. As a result Canada accepted that the 14 day rule was not supported by scientific evidence and hence was arbitrary.

Canada has been trying for the past ten years, especially since 1996, to change the regulation relating to age at slaughter. A number of proposals have been put forward to amend the meat regulations to remove the age limit, but there has been strong opposition on animal welfare grounds relating to the transportation of very young calves. The solution to the impasse will be to reference the part of the Recommended Code of Practice for the Care and Handling of Farm Animals – Veal Calves in the regulations. The age restriction will be removed but at the same time a higher standard of husbandry and transportation as described in the code, will be imposed.

The Recommended Code of Practice for the Care and handling of Farm Animals – Veal Calves, has set the minimum age for transportation at seven days, but for practical purposes the main areas of concern would be whether the calf is steady on its feet and has a dry umbilicus.

By referencing the transportation part of the Veal Code in the regulation, part of what is a voluntary code, with respect to transportation to federally registered slaughter establishments, will be mandatory. A penalty will be prescribed in the regulation for anyone in breach of the code. The regulation will not apply to calves transported for slaughter at non-federally registered provincial abattoirs.

Referencing part of the veal code in the meat inspection regulations is a precedent, however it is seen as an interim measure. The Health of Animals Regulations relating to transportation are currently being amended with the view to strengthening transportation regulations for all species. When this is achieved and there are strong provisions for enforcing the humane transport of bobby calves, the reference to the veal code is likely to be withdrawn from the meat inspection regulations.

Legislation relating to animal management is on the increase, there is concern that animal welfare issues may impact on trade of animal products. However Canada’s concern about the importation of bobby calf veal is not related to the welfare of calves in New Zealand, but is related to food safety issues and product suitability for human consumption - “How New Zealand treats its animals is New Zealand’s business. The New Zealand bobby calf story has been an exercise in regulation making, trying to satisfy the domestic stake holders and at the same time meeting international trade obligations with respect to New Zealand”.

### **Canadian Food Inspection Agency (CFIA), Ottawa, Gordon Doonan**

Gordon Doonan’s role is in humane transportation and farm animal welfare, he is involved with the development of the recommended codes of practice for the care and handling of farm animals. He is CFIA’s representative on the Expert Committee on Farm Animal Welfare and Behaviour, a sub committee of the Canadian Agriculture Research Council.

In Canada, the goal of recommended codes of practice for the care and handling of farm animals is to describe optimum standards. The codes of practice for the care and handling of farm animals are referenced in the Manitoba provincial legislation. Canadian agricultural industries in other provinces fear that codes may eventually be written into legislation and hence codes tend to be written to describe minimum standards, (regulation defines minimum acceptable standards). Industry would like to see the codes as complimentary to regulation, with codes providing the flexibility to cope with rapid change that regulation cannot provide.

The criminal code of Canada contains provisions relating to cruelty to animals. There is underlying support to strengthen the cruelty to animals provisions and a bill is currently going through parliament to achieve this objective. For example, if someone is cruel to wildlife, the criminal code does not apply because the animal has to be owned. Currently cruelty has to be wilful, which is very difficult to prove. However if wilful is removed from the provisions there is a concern that some acceptable farming practices may be proved cruel under the criminal code.

The cruelty to animals provisions of the criminal code are usually enforced by provincial humane society groups, most commonly the Society for the Prevention of Cruelty to Animals and the police. In addition there are provincial regulations and on farm animal welfare is dealt with under provincial legislation with humane societies still undertaking the investigation.

The Canadian Agrifood Research Council (CARC) manages the development of the Recommended Codes of Practice for the Care and Handling of Farm Animals. CARC have developed a process for writing and distribution of the codes (for further detail see the web site [www.carc-crac.ca](http://www.carc-crac.ca)). The proponent of a code, usually the National Commodity Association, for example, the Canadian Pork Council, writes a first draft which is submitted to CARC. CARC will then assemble a committee with representatives from a list of organisations, ensuring the major sectors are covered, and schedule a series of development meetings, conference calls etc. There are usually 10 –12 people on the committee including animal behaviourists, veterinarians, producers, representatives from animal welfare organisations etc. The committee then develops the code from the first draft written by the proponent. Committee members circulate drafts of the code to their constituents for input. When the code is finalised it is the responsibility of the proponent to arrange its distribution.

The CFIA would like to see the codes of practice used as they are nationally, without modification, however some of the provinces take the national code and other material that they may have and make their own versions.

#### Transportation Code

The most recent code relating to transportation took a long time to develop. Initially it was thought that the task would be easy as it was meant to result from a two-year consultative process between 1993 and 1995. Organisations across Canada participated in a transportation review to determine what Canadians wanted in a livestock transportation code.

One recommendation that came from all sectors was to take the transportation sections from the existing code to make a manual for truckers that dealt with all species.

The transportation code was consistent with existing codes, but used innovative ideas such as the use of graphs to show loading densities. The codes of practice express loading densities by space per animal, truckers way bills expresses loading rates as kilograms per unit of surface area. Loading densities in the transportation codes are expressed in both ways – the x axis shows the weight per unit of surface area, the y axis shows space per animal. Additional tables which did not appear in existing codes were also included, such as maximum step heights, ramp angles etc, these will be specifically useful for truck drivers and inspectors.

Codes need to be complimentary to regulations and provide flexibility to accommodate the rapid change that some industries are facing. Regulations are inflexible and can take a long time to change. For example, the Health of Animals Regulations simply say that during transportation, animals cannot be overcrowded in such a way that they will be exposed to suffering or injury. The codes of practice recommend loading densities for different weights, if in light of new research the recommendations become inappropriate, they can be changed simply and quickly.

The transportation code will be distributed across Canada by the CFIA as the proponent of the code.

The CFIA have issued a Manual of Procedures for the Humane Transport program to their inspectors. It is a comprehensive manual with sections on surveillance and enforcement it is cross-referenced to the CFIA Enforcement Policy.

In 1996 in British Columbia the CFIA trained and designated under the Health of Animals Act some external inspectors from the Ministry of Transportation, Society of Prevention of Cruelty to Animals, Brands Inspectors and the Royal Canadian Mounted Police (the Mounted Police did not have to be designated because they have authority to enforce any national legislation – however they undertook the course). These external inspectors became the “eyes and ears that we did not have in places that we never go” and produced well written detailed reports that enabled the CFIA to take appropriate enforcement action.

The CFIA recognised that this could be done on a national scale and that the external inspectors did not have to be designated the Health of Animals Act, the CFIA could conduct the investigation if the external agency provided a report. CFIA invite external agencies and industry to training programs, both as participants and trainers, networking has begun and as a result the CFIA is more aware of what is happening in industry. Awareness of codes within industry has increased and industry has been motivated to more compliant with the codes, knowing that in the absence of CFIA inspectors there are others who know the regulations and are prepared to make a report if the codes are breached.

In 1995 data was collected from places where CFIA inspectors were routinely stationed such as federally inspected slaughter plants and border crossings to measure compliance with the transportation regulations. As expected, levels of compliance approached 100 per cent as everyone knew that there were inspectors at those sites.

In 1998 CFIA inspectors commenced unannounced roadside checks on livestock carriers, the level of compliance at these checks was 86 per cent and industry became aware that CFIA inspectors could show up anywhere, any time. These checks are done with other agencies with the authority to stop a truck and inspect the load, such as the Ministry of Transport at a weigh scale or with the Provincial Police or the Royal Canadian Mounted Police.

#### Transportation of young calves

Industry has written into their veal code that calves less than seven days of age should not be transported, loading densities are written into the veal code and there are minimal problems with transportation of young calves as they all have room to lie down in transit.

Calves between 8-14 days of age imported from the USA for milk or grain fed veal production – there is a time restriction on how long they can be transported – they have to get to the border within 8 hours of the time they were certified by a veterinarian in the USA. Calves are inspected at the border and have to move to previously inspected and approved premises, they have to move from this approved premises directly to a federally inspected slaughter plant. Any deaths during the rearing period have to be reported to the CFIA.

#### **Ontario Veal Association – Jennifer Haley**

The Canadian veal industry is concerned that the Canadian consumer will be confused about the definition of veal and consumer confidence will be eroded if milk fed and grain fed veal are associated with bobby calf veal.

The Canadian veal industry is based in Quebec and Ontario, following the same distribution pattern as the dairy industry. Most bull calves born into dairy herds in the west of the country (British Columbia, Alberta) end up as feed lot steers.

Some bob veal is processed in Quebec, mostly for export to USA. Most veal processed in Canada for domestic consumption is milk fed veal.

#### Dairy Industry statistics

There are 7,000 dairy farms in Ontario with an average herd size 60 milkers (range 20-300) (approximately 400,000 milking cows), the predominant breed is Holstein. Larger herds are becoming

more prominent. Cattle are housed in winter (from late October to the end of April) and calving is year round.

The dairy industry is regulated by a daily milk supply management (quota) system. Dairyfarmers buy quota. The milk supply management system is a government backed and designed system that controls milk production and marketing. There is a cost of production formula which is used to establish the price at which milk is to be sold to the processor. There are approximately six pricing levels for milk and milk products. The supply management system also controls the number of trucks a milk transporter can own, which milk can be transported and to where.

A drop in cow numbers on dairy farms (cow numbers down but production is up) has caused problems with the supply of bull calves, Canadian veal producers need to source calves from the US. The Ontario Veal Association finds it hard to create consumer demand when supply cannot be ensured.

Semen sexing could benefit the veal industry by allowing the use of bulls which produce the best meat calves. Currently the veal industry uses a by-product of the dairy industry and has no opportunity to implement a breeding strategy.

There are significant problems with dairy bull calf health management on the dairy farm. Colostrum management, cleanliness of the calving stall and post natal management can be variable, however dairy farmers are beginning to realise that bull calves (and cull cows) are a meat product.

Education programs directed at dairy farmers have increased the supply and quality of bull calves to the veal industry. Currently new born bull calves are bringing about \$200 (Canadian)/head, the five year average price per head is \$85.

Industry standards recommend that veal calves are not transported before they are seven days old, in practice calves are “probably leaving the farm within two to three days of birth”. Veal producers source calves locally where they can, but bigger operations have to source calves up to ten hours travel time away.

The Ontario Veal association does a lot of work to promote veal consumption. Traditionally the main consumers of veal have an ethnic background (Jewish, Portugese, French, Italian, Greek), however many of these are now second or third generation Canadians who have changed their eating habits potentially leading to a decrease in the number of consumers. There is an emerging Anglo-Saxon market and veal features strongly in the restaurant trade.

Many potential customers, who have no objection to veal on animal welfare grounds, do not think of veal as an alternative to beef, pork or chicken. They have no recipes for veal and would not buy veal in bulk and store it in the freezer. The Ontario Veal Association is working to change these attitudes.

A vertically integrated company controls the milk fed veal industry in Ontario. They manufacture milk replacer, slaughter and process veal and grow calves corporately or on contract in Ontario and north eastern USA. There are very few independent milk fed veal producers.

Grain fed veal producers are all independent, the average grain fed veal operation turns off 150 – 200 calves per year in a seven month cycle. The heaviest grain fed veal calves weigh approximately 320 kilograms live weight at seven months of age, they dress out to approximately 205 kilograms - a dressing percentage of 63 per cent (which includes hide weight). The average live weight for a finished grain fed calf is 307 kilograms dressing out at 195 kilograms hot, hide on.

Canada has an upper weight limit in carcass grading regulations. A 205 kilogram hot, hide on carcass is a veal carcass, a 206 kilogram hot, hide on carcass is ungraded beef. Misjudging marketing time can result in carcass down grading and loss of income.

In Canada veal is hung with its hide on to keep its colour and moisture content, this is a critical control point in a food safety program and a research project is currently under-way assessing the microbiological effects of hide on versus hide off.

## **Grober, Michael Cooper – Marketing Manager**

Grober is the largest milk fed veal operation in Canada. Grober manufactures milk replacers, grows calves corporately or on contract and operates Delft Blue, a meat processing plant. Grober does not grow grain fed veal, however Delft Blue does process grain fed veal. Grober exports over 65 per cent of milk fed veal products, mostly to the USA to supply the premium end of the ethnic market in New York, but also to Japan.

### **The Grober Farm at Cambridge, Ontario**

There are 2,600 calves in this unit at any one time. There are nine labour units on the farm including the manager. There is an 18-20 week production cycle and 7,280 calves go through the unit each year.

The cost of establishing a milk fed veal calf shed is currently about \$1,800 (Canadian) per head. Ventilation is very important, variable speed fans deliver fresh air, sheds need to be heated in winter. The veal unit is built on a 170 acre farm. Effluent has to be managed within the farm and must not contaminate waterways. This farm has just spent \$500,000 on a water re-use system for cleaning. Pens are flushed once per day. There is a five day period between batches during which pens are taken apart and thoroughly washed and disinfected.

Calves are sourced from Canada and also from the USA by special permit. USA sourced calves are tightly regulated. They are tagged with metal tags by a United States Department of Agriculture accredited veterinarian before they are shipped to Canada, Canadian Federal vets at slaughter plants have to account for each tag. USA origin calves are effectively in quarantine in the milk fed veal facility for the whole production cycle.

In April 2000 calves were expensive and in short supply - this farm was paying \$300 (Canadian) for a 45 kilogram calf plus transportation costs of \$20 - \$30 per head. Grober aims to buy calves at 50 kilograms live weight if they are available, they are unlikely to buy calves less than 41 kilograms live weight. The industry average mortality in milk fed veal production units is 3.5 – 4 per cent. The average mortality at this farm is 2.6 per cent.

Grober aim to produce a 205 kilogram live weight calf producing a 141-146 kilogram, hot dressed, hide on carcass. The price of veal in April 2000 was \$5.83 (Canadian) per kilogram hot dressed on the rail, hide on.

All antibiotic usage is recorded, calves are treated on an individual basis only at therapeutic rates, antibiotics are not added to milk replacer. A technician decides which calves are to be given medication a vet is on call on a retainer.

Haemoglobin levels are checked on arrival, at nine weeks and close to finishing, calves are given an iron supplement if necessary.

Calves are kept in rectangular ventilated rooms on slats in individual crates which are 26 inches wide and 6 foot long. There are two rows of thirty crates down side of the room with a central isle. Calves in crates are fed twice per day according to a feeding schedule developed by Grober.

Grober have been experimenting with loose (group) housing systems at this facility for the last 15 years. Loose housing ad libitum feeding systems result in unevenness of size in the calves at the end of the production cycle. To be successful, loose housing requires automated feeding and technology is available to control feed intake. An electronic transponder worn as an ear tag and read at a nipple station, can communicate with a computer programmed to determine when and how much a calf can drink and number of feeds per day. This technology has been developed in Europe.

The milk feeder seen at this facility can run four nipple stations. Some calves also had access to two grain feeding stations. Grober was trialing feeding a small amount of grain to allay animal welfare concerns.

Some automated feeding equipment now prints out feed consumption per calf, the next generation of machines will allow body temperature to be recorded while feeding, through a sensor in the teat.

Calves are currently only weighed in and out of the facility, new equipment is available that will record the weight of the calf at every feed.

There is little difference disease wise between loose housing and crates, however better calf management skills are required to successfully manage loose housing – “the operator needs to have the skill and patience to find and treat the calf that coughed”. Calves kept on slats in loose housing are dirtier than calves kept in individual crates. Calves prefer something at their back when they lie down and lie down around the walls in loose housing systems. Dripping water and brushes and provided in loose housing systems to enrich the environment of the calf.

Grober has an ongoing program of in house research and development. For example some rudimentary green houses have been developed in association with calf rooms. Warm air from the calf rooms is taken through a peat moss bed in the green houses to remove the smell. Hot air provides heat for the green house and provides growing conditions in the winter months. Manure is diluted as a hydroponics base for peppers, tomatoes, cucumbers etc.

### **Dairy Farm Drumbo, Ontario, Grant McLaren**

400 acre farm including 100 acres soy bean, 150 acres of corn, 100 acres of hay. 35 inch rainfall. Approximately half of the hay, soy and corn grown on the farm is fed to the cows. Milk 60 Holstein cows, year round calving with 4-6 cows calving per month.

Cows are housed in tie stalls in winter and let outside on a restricted area during the day at other times. They produce 9,000 - 10,000 litres per cow per 305 day lactation - approx 30 litres per cow per day. Price per litre liquid milk - 50cents (Canadian).

### **New York State Dairy Industry Statistics**

750,000 cows  
8,000 dairy operations  
Average herd size 90 cows  
Price per litre of liquid milk 26 cents (US)

10 per cent decline in the number of dairy operations per year  
2 per cent decline in cow numbers per year  
milk production up 2 per cent per year

average number of lactations per cow – 2.8  
average inter calving interval – 13.5 months

two tillable acres provides feed for a milking cow and her calf

### **Cornell State University Dairy Cattle Production Unit – Dr Chuck Guard**

The Cornell State University Dairy Cattle Ambulatory and Production Unit is a full service large animal practice of 10,000 cows that functions as part of the training program for veterinary students.

The concept that the welfare of an animal is separate to the interests of economic production was not understood or practiced in the USA. Dairy industry personnel were surprised that anyone would suggest keeping and feeding a calf until it was four days old and better able to cope with transportation, where there was no likelihood of a significant economic return for time and feed invested in the calf. They suggested that this could be seen as an infringement of individual rights to earn an income - “How can you expect a farmer to feed an animal when they will be paid no more for the end product”.

The income received from the sale of bob calves is insignificant when compared to milk income and many producers suggested that the time and feed required to condition a calf was not recouped by the premium price. There was no incentive to manage calves well when the price was low and little more when price was high.

### **Calf management in a herd of 50 milking cows**

The herd manager gives all calves, including those to be sold, colostrum at birth. Calves are tube fed if they do not suck, calves are fed twice per day either by nipple or tube until sold. Calves are sent to the sale barn either on a Monday or Wednesday. Calves born on Wednesday, Thursday, Friday, or Saturday and sold on Monday, calves born on Sunday or Monday and sold on Wednesday.

### **Calf management in a herd of 280 milking cows**

Bull calves are given a quart of colostrum if it is available and may get some milk out of the vat, they are trucked to the sale barn by the owner "as soon as possible".

### **Calf management in a herd of 300 milking cows**

This dairy farm has the following mission statement:

*"We produce food for ourselves and our community, we will produce wholesome, high quality milk.*

*We will create a work environment that encourages team work as well as individual responsibility and growth.*

*We will conduct our business in a way that presents a clean professional image to the public.*

*We will be good neighbours and good stewards of our environment.*

*We will remember that both our cows and our people contribute to our success."*

Bull calves were managed in accordance with this statement, they were given two quarts of colostrum by nipple or tube at birth and then fed two quarts twice daily until sold. Calves are sold twice per week and this farm has a policy to retain all calves until they are 3-4 days of age and have a dry navel (these calves attract a better price at the sale barn).

### **Calf management in a herd of 500 milking cows**

Calves are sold twice per week, Monday and Wednesday. Bulls receive colostrum at birth and get their navel dipped in iodine "if they are around from then on, they get milk replacer". "A big calf born on Tuesday will be kept to Monday, to attract a premium price, but a small calf born on Tuesday will be sold the next day".

### **Calf management in a herd of 2,000 milking cows**

Bull calves receive the same initial care as heifers and receive a gallon of colostrum, by tube, as soon as possible after they are born. Bull calves are moved with the heifers from the maternity pens to the calf rearing facility within hours of birth and bull calves leave the farm twice per week, between 1-4 days old, some to a calf grower and the remainder to the sale barn. Six bull calves that were born between 2pm on 8 May 2000 and 9am on 9 May 2000 were on the truck to the sale barn at 9.35am on 9 May 2000, they were sold within their first 24 hours of life.

Calves are transported on a per head basis, but on a sliding scale with cost per head diminishing as the number of calves transported increases. The selling agent receives a six per cent commission on the sale price.

The calf manager instructs the calf buyers to take all calves in the pens. "The price of bob calves is now up, but over the past year it has been really low, lucky to average \$30 US per calf, and it does not pay to feed them. The current price for better calves is currently over \$100 US per calf, but the smaller ones are still marginal". One of the owners said that a three day old, healthy calf with a dry cord usually attracted a premium price.

### **Empire Auction Barn at Dryden**

In May 2000 there was an increased demand for calves and prices were up. Most of the calves were purchased for growers, however buyers from slaughter houses were represented.

Calves were sold individually at auction, with approximately 10 buyers present. Half of the calves presented for sale had a wet umbilical cord and were estimated at less than two days of age. Calves sold averaged 44 kilograms live weight (range 34-55kg), average price paid was \$157(US) (range \$63-\$212(US) per calf) and average price per kilogram was \$3.58(US) (range of \$1.63(US) - \$4.40(US) per kilogram. The weight of the calf was announced, however it was only one of the variables taken into consideration by buyers, who made a visual assessment of the relative merit of the calf in the auction ring, the heaviest calves did not necessarily attract the highest prices.

Prices paid per kilogram of live weight varied dramatically, possibly as the result of buyers needing to fill orders for calves in certain weight ranges.

### **Penn State University, University Park Pennsylvania, Dr Lowell Wilson, Dr Dave Wolfgang**

The veal industry started in Pennsylvania in the late 1960's early 1970's, influenced by Dutch expertise in growing veal, the availability of cheap calves (\$2 US per head) and the promotion of white meat through marketing of chicken.

There are about five integrated companies in Pennsylvania that produce white veal, Marcho Farms is one of the largest, these companies manufacture milk replacer, grow and process and pack veal calves. In addition there are five independent feed manufacturers and distributors and eight independent packers who contract calves with independent veal producers.

There are three sources of veal, bob, special-fed and non-special-fed.

Bob veal or bobby veal is processed at a live weight of less than 68 kilograms, usually within the first week of life.

Special fed, formula fed, fancy or white veal is a tender, pale pink meat, from calves fed only a liquid diet made primarily from milk products in which the iron content decreases in the through the last half of the production cycle. The special fed veal calf is slaughtered at a live weight between 180-220 kilograms at 18 - 24 weeks of age. There is a continuing trend for longer feeding periods and heavier slaughter weights to produce as much finished weight as possible per calf, especially with availability of fewer calves and higher initial calf prices. Many producers feed special-fed veal or start dairy beef calves, depending on the market outlook

Non special fed, red veal also known as grain fed veal, rosa veal, welfare friendly veal or baby beef is a tender, dark pink – red meat from calves fed a milk based and grain diet for 6-8 weeks, followed by a grain or grain and pasture diet. Grain fed veal calves are raised to a live weight of 273- 391 kilograms at approximately 7 months of age.

Current high prices for bobby calves are the result of competition between beef feed lotters and veal producers. Few calves are currently being slaughtered as bob calves. Beef numbers are down as the result of low prices over the last few years and beef producers are now buying Holstein bull calves to grow out to 545 kilograms live weight for the dairy beef market. The buoyant economy has lead to an increased demand for veal and as a result, veal prices are high.

Ontario is at the cutting edge of the grain fed veal industry, USA produces very little grain fed veal, most of what is produced is "by accident". Red veal can be produced a lot cheaper with less welfare concerns and less health problems compared to white veal.

### **The primary concerns of the veal industry have been:**

reduction of violative carcass chemical residues,  
health status and quality of calves from dairy herds, the only source of calves for veal production,

non-science based criticisms of components of veal production systems and the profitable sustained marketing of veal.

### ***reduction of violative carcass chemical residues***

Most veterinary chemicals are not registered for use in veal calves because they are pre-ruminants. There is no incentive for pharmaceutical companies to register products for use in veal production units, as they have no wish to assume liability and the products will be used via off label recommendation in any case. The greatest need for drugs is during the first 4 to 6 weeks of the 16-20 week production cycle, allowing a potential 10 week withdrawal period for drugs used early in the production cycle. In the late 1980's there was a 3.3 per cent violative antibacterial residue rate in veal, the rate was down to 0.11 per cent in 1993.

An educational veal quality assurance program commenced in 1989 to minimise the high violative residue rate. The veal producer was expected to be in a valid client vet relationship and to adopt management practices to ensure veal with violative levels of antibacterial residues did not enter the food chain. In 1995 the Veal Quality Assurance Certification Program commenced, this program is administered by the American Veal Association and operates on two levels. Level 1 is a temporary phase, allowing the producer time to complete the Level 2 requirements. Level 2 requirements include a thorough review of the Veal Quality Assurance Program (VQAP) materials, participation in a VQAP seminar, engaging a veterinarian to advise on the calf health program and completion of a farm program self assessment with a veterinarian.

Currently 70 per cent of veal is produced by Level 1 or 2 certified producers. The program also has certified suppliers, including most of the feed and drug companies that supply the veal industry. There is no external auditing, the program relies on self assessment, in order to retain certification the producer must complete an open book test.

A number of small independent producers are contracted by Marcho Farms, one of the biggest integrated veal companies in Pennsylvania, to produce special-fed veal. Generally independent growers raise between 200-300 calves three times per year. Marcho Farms have engaged a consultant veterinarian to provide a herd health service and develop calf health management protocols. Marcho Farms want to eliminate irrational use of antibiotics through the development of appropriate disease prevention and treatment protocols. The VQAP does not describe any disease prevention or treatment protocols, it concentrated on educating producers to follow directions and observe withdrawal periods.

### ***health status and quality of calves from dairy herds***

Veal production is based on an "all-in, all-out" method of obtaining animals and marketing. The number of calves in a group can vary from 60 to over 200, with the calf room filled within a few days or all at one time. A group of 60 calves may be from 60 different dairy farms via five or more livestock auction barns. Primary health problems are respiratory and enteric with occasional navel and ear infections, usually occurring during the first six to eight weeks of life.

The poor level of management of dairy bull calves impacts badly on the veal industry. There is now some attempt to pay a premium for "pre-conditioned" calves in an attempt to reduce calf morbidity and mortality and increase liveweight gains. The health status of calves entering veal production is largely determined by the care and handling of calves at the dairy farm, during transportation from the dairy farm to the auction barn and then on to the veal farm and early management techniques at the veal farm. The primary concern is the sufficient intake of high quality colostrum by the calf as soon as possible after birth.

There are regional differences in colostrum intake of calves, with colostrum deficiencies observed in 80 per cent of calves entering Californian calf rearing units and 20-40 per cent of calves entering calf units in Pennsylvania. Other practices such as use of a 7 per cent iodine solution on navels, clean calving pens, dairy herd vaccination programs and handling /transportation methods to reduce calf stress are related to the profitability of the veal enterprise and with the frequency of the use of medication.

The mortality in white veal units is between 2.6 and 3.8 per cent. Occasionally, as a result of an outbreak of salmonellosis mortality rates reach 50 per cent. It is important to identify health problems

early and deal with them aggressively. The USDA Food and Drug Administration strongly discourages using antibiotic in feed and medicating whole calf barns and prevents the use of growth promotants in special fed veal.

Haemoglobin levels of special-fed veal calves are lower than conventionally raised cattle. Three to ten per cent of veal calves in studies in the USA are considered clinically anaemic (haemoglobin <7.0 g/dl). Increasing numbers of veal producers are measuring haemoglobin in all calves at 10, 15 and 18 weeks into the feeding period with individual iron supplementation by oral administration or injection based on individual haemoglobin values.

### ***non-science based criticisms of components of veal production systems***

Changes in animal production systems should be based on objective science fact rather than on emotional contentions, or political, trade or philosophical arguments. The appropriateness of present veal production systems will continue to be questioned by animal activists, animal welfarists and others.

Proponents of individual stall systems contend that air temperature and humidity can be more adequately regulated, wastes can be more efficiently handled, cross contaminations of pathogens between calves is lessened and individual observation, feeding, examination and medical treatment can be accomplished with less stress from handling. Carcass quality and size are more uniform when calves are individually fed and housed.

Europe has to phase out veal crates for calves more than eight weeks of age by the year 2004, USA believes that group housing systems for older special fed veal calves could be more detrimental to their welfare. Canada has done a lot of trail work with group feeding of special fed veal calves, for example Grobers show barn in Cambridge Ontario has group fed calves, however 90 per cent of Grobers special fed veal calves are still individually stalled.

Management practices required for group housing including ventilation, bedding type, group size, fibre inclusion in the diet, space allowance and social dynamics need to be identified.

### ***the profitable sustained marketing of veal***

Carcasses from special fed veal are used primarily to meet the hotel, restaurant, institution (HRI) demand for larger veal cuts, although there is also a demand for veal at retail outlets. The quality of special fed veal is more predictable. Carcasses from bob veal are used for boneless cuts and processed HRI and counter items.

It is very difficult to distinguish between white and red veal based on taste. Most chefs in the USA would not use red veal, because the paleness of white veal is a guarantee that the calf is young and has been fed a prescribed diet. There is a higher risk of substitution of other red meat for red veal. Bob veal carcasses have less internal, external and intermuscular fat and more bone than special fed carcasses

Special-fed veal calves are weak and if stressed will “fall over”, however if a veal calf is not stressed and handled appropriately during transportation and at slaughter there are few problems.

A specialised domestic market is needed to sustain both a special-fed and non-special-fed veal industry.

### **Marcho Veal Slaughter Facility, Lansdale, Dr Adnan Aydin**

Marcho Veal has 160 growers who between them manage 40,000 crates and produce approximately 100,000 calves per year. Marcho has six service men providing technical advice to growers in different districts and a contracted veterinarian. All calves are slaughtered at Marcho Veal at Lansdale, just north of Philadelphia. Marcho only slaughters veal produced by Marcho growers and believe this gives them a marketing advantage over their competitors as they can control quality from the beginning of the growing period. Marcho is growing at 15 per cent per year. Marcho's supplies the domestic

market in the east coast of the USA and consumers are predominantly Italian and Jewish. They do not export meat, however they do export some offal.

Calves are transported in trucks owned and operated by Marcho, good drivers are important to ensure that calves arrive in good condition. Drivers stop every 1.5 – 2 hours to check the calves, they will administer dextrose to calves if necessary. The longest travel time to slaughter is eight hours. Calves are slaughtered within a few hours of arrival at the slaughter house, those which travel the longest distance are slaughtered first. Carcass yield is 63.5 per cent, 1.5 per cent higher than average. United States Department of Agriculture (USDA) inspectors frown on the practice of keeping hide on carcasses on food safety grounds. The hide is not kept on the carcass at Marcho, as it is in Canada and some places in the USA.

Good quality water is critical to the success of a veal growing enterprise. Citric acid is used to correct pH of water to neutral is necessary.

Marcho purchases baby calves and provides all feed and medicine. In most cases Marcho provides a cash flow anywhere between \$1.50 - \$3 (US) per calf per week. At the end of the growing period payment is made according to weight and market price, typically the Marcho price is a few cents above the eastern market price. Deductions include whatever has already been paid, cost of feed and medication and \$10 (US) per calf (as interest for all the expenditures). In some cases when veal prices are low, Marcho has written off the grower advance.

In low markets Marcho's margin on milk replacer protects against a meagre margin on meat. As a result of consolidation, food chains have buying power and can dictate the price they are prepared to pay, leaving Marcho with little room to negotiate. To stay profitable Marcho continues to seek ways of increasing efficiency.

#### **Marcho Farms – Calf Barns near Susquehanna - Dorothy Mininger**

There were six barns at this facility, with six rooms per barn and 100 crates per room. Each barn was leased to a different grower. Crates were 24 inches wide and seven foot long, there were divisions at the front of the crates and calves were chained (stainless steel chains). Haemoglobin levels are at the low end of normal, when calves are moved they feel the effects of low haemoglobin and lack of exercise. Antibiotics are added to milk replacer including chlortetracycline, bacitracin and apramycin.

Rearers start with calves that are co-mingled, colostrum deficient, dehydrated and often anaemic on arrival. Calf "jockeys" deal in calves, they buy and resell and calves can be 24 hours without feed between the sale barn and the veal farm.

Currently the average price per calf is \$218 (US) (compared to \$60-70 (US) per calf in the barn in 1999) and as demand increases, price increases and the quality of calves goes down. Smaller calves generally do not perform well on veal farms due to poor management before they leave the dairy farm. Dairy farmers usually do not put any effort into smaller calves because if calves are in good supply, veal growers will avoid them and if calves are in poor supply veal growers are forced to buy them anyway.

#### **American Veal Association**

The American Veal Association (AVA) was founded in 1984 and currently represents 1,300 veal farmers and allied industries including feed suppliers, drug companies, processors and packers. Representatives of all these different sectors are on the AVA Board of Directors. Its main purpose is to work with the veal industry to ensure that American consumers have access to safe wholesome veal. The AVA actively promotes the veal industry and veal consumption, gathers, evaluates and distributes information relevant to the industry, manages issues concerning the industry and administers the Veal Quality Assurance Program (VQAP).

The AVA have been active with the dairy industry in the development of a Calf Care Protocol for dairy bull calves which aims to improve health and quality of bull calves leaving dairy farms.

The quality of dairy bull calves “returning to farm” for special fed veal and dairy beef production is a major concern to the veal and dairy-beef industry. A survey of 131 calf buyers and auction markets in Pennsylvania conducted in 1997 found that 60 per cent of calves were sold to be raised as veal, 26 per cent to be raised as dairy beef, and 14 per cent went directly for slaughter. Many of the calves sold had identifiable problems, 12 per cent had a wet navel, 7 per cent had trouble walking, 24 per cent had scours or respiratory problems and 23 per cent were dirty.

The Calf Care Protocol relies on each producer, calf handler and trucker taking an interest in improving the quality and health of calves, by providing them with constant reminders of the factors that determine calf health, delivered with the cheques they receive for those calves, sold, handled or transported.

The reminders are printed on both sides of a card the size of the envelope used by most livestock markets or buying stations and can be mailed with the calf cheque. Producers who send poor calves to market and receive less for their calves, should realise the reason(s) for the low price. Producers who receive higher prices for their calves may overlook one point of the checklist on the card and may obtain an even better price by improving that one management practice.

Livestock markets and calf buyers help distribute these materials because the calf buyer is better served as the sales commission is higher and a 3-8 day old calf is easier to handle and move than a 1-2 day old calf. Markets and truckers are visible to the public, their reputations are at stake, and their activities may well be legislated, should the public or activists be dissatisfied with the way animals are received or handled.

The promotional material reads as follows.

*“Your dairy bull calves have a future*

*bob veal  
dairy-beef  
special-fed veal*

*Quality calves bring premium prices!*

*Over \$350 million in calves and milk products or by-products are bought each year by veal and dairy-beef producers.*

*Help these producers who buy your calves stay in business by marketing quality calves.*

*The profitability and future of veal and dairy-beef production depend on the health and quality of the calves you market.*

*How can quality calves be produced to premium prices?*

*Comprehensive herd health program in place  
Calve cows in clean, sanitised, dry and well ventilated maternity areas  
Dip navels in seven per cent tincture of iodine as soon as possible  
Feed high quality colostrum within two hours after birth and at least three times with the first 18 hours  
After colostrum, feed calves a milk replacer or milk that does not contain antibiotics  
Don't use antibiotics or vaccines on calves that may be sold for bob veal  
House calves in a clean, dry, well-bedded, well-ventilated, but draft-free area  
Only market calves that are three days old or older and able to walk unassisted, and have a dry navel  
Handle calves carefully to reduce stress and prevent injury  
Transport calves to market in enclosed, clean, dry, well-bedded and well ventilated trucks: separate from larger animals  
Calves should spend as short a time as possible in the market channel (farm of origin – market – final destination)*

*The American public is watching all parts of our industry. We must use professional, humane care and handling of all our animals.”*

## **Farm Animal Reform Movement (FARM), Washington Dr Alex Hershaft**

FARM started out as a vegetarian information service, the organisation then became interested in animal rights but was unable to achieve legislative change to reform “factory farming” practices, it has now reverted to promoting vegetarianism and organises an annual national “Meat-Out” day.

The term factory farm has been coined because of the way production is now viewed on some farms. Inputs from are put together to produce a product in the most cost effective way possible. Factory farming has led to a transition from labour intensive to equipment intensive production, which started in the chicken industry and went from there to pigs, dairy and beef production. Equipment intensive systems need capital, which led to integration, at first horizontal and then vertical.

As production methods changed, the attitude of producers to animals changed to the point where they are no longer regarded as they once were on a typical family farm but are now regarded as tools of production. FARM is concerned that farm animals in America have been subjected to increasingly inhumane conditions as the direct result of factory farming practices and that many practices common in animal agriculture are being excluded from legal censure. “Thirty states have enacted laws that create a legal realm whereby certain acts, no matter how cruel, are outside the reach of anti cruelty laws as long as the acts are deemed “acceptable” “common, “customary” or “normal” farming practice. These statutes have given the farming community to define cruelty to animals in their care.” David Wolfson – Beyond the Law

The five principal animal welfare organisations working to improve the welfare of calves include

Farm Animal reform Movement (FARM)  
Farm Sanctuary  
Humane Farming Association in California  
Humane Society of the United States (HSUS)  
People of the Ethical Treatment of Animals (PETA)

FARM operates from the philosophical stand-point and is desk bound, FARM has a number of people who are campaigning to abolish veal crates. Farm Sanctuary has more experience of the production details of the veal industry and is field based in that they undertake field investigations at auction yards, slaughter houses etc.

FARM did not have a major interest in bobby calves as they believed that most male dairy calves were crated and raised for veal.

FARM has become disillusioned with attempting to achieve reform the meat industry and actively promotes vegetarianism. They believe that USA federal and state governments have no compassion or any other kind of concern for other living beings, have no interest in farm animal suffering and that the meat industry in the USA cannot be regulated.

FARM believes that the only prosecutions on the grounds of cruelty to farm animals are those where there has been extensive media involvement and that adverse publicity via the media is needed to get enforcement agencies to act. FARM is concerned that state legislation and industry codes of practice condone management practices that are cruel, on the basis that they are commonly used – “...if one person is unkind to an animal, it is considered to be cruelty, but where a lot of people are unkind to animals, especially in the name of commerce, the cruelty is condoned and, once sums of money are at stake, will be defended to the last by otherwise intelligent people.”- Ruth Harrison Animal Machines FARM believe that industry codes of practice where they exist are not well publicised and certainly not enforced or accepted.

FARM have stopped dealing with individual welfare issues and have stopped trying to achieve legislative reform with issues relating to animal welfare. “We just tell people of the horrors that are going on - if you want to be part of the solution, rather than part of the problem, you only have one way out, stop eating meat”.

FARM advised that all bills relating to agriculture have to pass through the Senate and the House Agriculture Committee. The Committees are usually made up of members who are brought and paid for by the industry that they regulate. “Of all the bills that pass through the Agricultural Committee maybe 2-3 per cent get up – the others are killed. That is why it is virtually impossible to get any meaningful regulation of the of the industry passed through congress, it does not mean that the public does not feel strongly about the humane treatment of animals – their voice is just not heard.”

FARM cited an example of the management of downed cows at the South St Paul Stockyards in Minneapolis about six years ago. Videos were taken of the mistreatment of downed cows, the scenes were gut wrenching, some were shown on national television and the public reaction was overwhelming. The Secretary of Agriculture said that he was shocked and embarrassed and went on to say that under his administration “the rights of farm animals would be protected”. This was a glory day for FARM as it was the first time that a secretary for Agriculture had spoken of animal rights. The Downed Animals Act was introduced about five years ago, it is still pending.

### **Humane Society of the United States (HSUS), Washington, David Kummerle**

HSUS was founded in the 1950’s and promotes animal protection and humane treatment of all animals including wildlife, farm animals, animals in research and companion animals. HSUS has an annual budget of \$35 million (US) by fund raising and public subscription. HSUS is strongly opposed to factory farming on both environmental and humane grounds and works with industry and consumers to help promote the family farm. HSUS like to work with other animal protection organisations when their interests cross paths, HSUS has worked closely with Farm Sanctuary on the Downed Animal Protection Act. HSUS undertake investigative field work to uncover animal abuse and offer rewards for information leading to prosecution for acts of cruelty. HSUS will bring cases to public attention through the media and force enforcement agencies (often the police) to act.

HSUS aims to create awareness of the environmental and ethical costs of factory farms and to encourage consumers to reduce or replace animal based foods in their diets. They aim to inform the public of the differences in production methods in factory farms compared to family farms and encourage consumers to reject factory farm products and help create a market for products from farms using more humane, sustainable practices.

Their “tips on humane living” are as follows: “Try following the 3R’s: **reduce** your intake of animal based foods, **refine** your diet by eating more humanely produced food, and **replace** animal based food with non animal food.”

HSUS works for legislative reform with issues relating to animals welfare and also creates awareness of farm animals lack of legal protection. “Farm animals are excluded from the federal Animals Welfare Act. State anti cruelty statutes specifically exclude or are rarely applied to them. No federal laws require that animals be treated humanely on farms and ranches. The two federal laws that do offer any protection to farm animals have serious deficiencies. The Twenty –Eight-Hour Law pertains to transport, but is does not apply to trucks – by which approximately 95 per cent of all farm animals are transported. The other, the Humane Slaughter Act, excludes both poultry and animals used for ritual slaughter from its oversight.”

There is a huge network of local Humane Societies, which are not owned or operated by the HSUS. HSUS works with local Humane Societies, advises them and provides funding for animal shelters. HSUS has 10 regional offices in the USA and its international arm Humane Society International has offices abroad, including Australia. Staff from the central office meet twice per year with regional staff to discuss programs and projects.

HSUS work through education in schools and the public arena, consumer campaigns and campaigns to encourage the public to engage in the political process and give voice to animals in the legislative arena to build a body of law to protect animals. HSUS do not engage in demonstrations or civil disobedience, where possible they aim to build bridges with industry and have provided funding to livestock organisations to promote humane treatment of animals for example HSUS funded the upright restrainer for religious slaughter designed by Temple Grandin.

The Egg Campaign operates by targeting a city, contacting the supermarket chains represented there advising them that HSUS wants to gauge consumer interest in free range eggs. HSUS then mails members and constituents in the area, places advertisements in the local newspapers and provides a coupon that can be cut out and sent to the supermarket asking the supermarket to carry free range eggs.

HSUS take a pragmatic approach to animal protection. They believe that people are going to continue to use animals, they do not promote vegetarianism and abolition of food animal agriculture, (this is a matter of personal choice) they aim to bring about changes that result in more humane treatment.

HSUS reports that there is little information on the management of bob calves. HSUS have video footage of calves being thrown, dumped, prodded etc and would consider it a tremendous victory if calves had to be able to walk before they left the farm.

Recently HSUS obtained video footage of a worker on a large dairy farm in Florida disposing of newborn calves. The footage was made public. The worker carried the calves from a cart by their legs and dropped them into a five feet deep pit with a foot of rainwater in it. When three or four were in the pit the worker shot them inexpertly in the head and repeated the process until about 15 were lying in the water. Many of the calves were still alive after being shot and were struggling to keep their heads above water. As a result new rules are being drafted governing the way Florida disposes of cull animals including calves. The dairy farm agreed to enter into a pre-trial intervention agreement, a disciplinary measure, in lieu of criminal prosecution.

Following is an abstract on surplus calves prepared for the American Society of Animal Science / American Dairy Science Association meeting in July 2000 by Suzanne Millman, of HSUS

*“Neonatal calves present unique problems for those transporting and marketing them. Recently, the dairy industry has been criticised for failing to ensure adequate care for surplus calves. In this review of the scientific literature, attention is drawn to factors affecting the welfare of surplus calves in transit, and suggestions for improvement are presented. According to the USDA, approximately nine million dairy cows and heifers calved during 1999. Assuming that 50% of these calves were males, 4,500,000 bull calves were culled or marketed. Of the 1,042,000 calves that were slaughtered in federally inspected plants, 42.9% were bob veal and 52.4% were formula fed calves. If federally inspected plants are representative of the industry, there were at least 1,017,000 neonatal calves transported during 1999, either to a formula fed veal production unit or directly to slaughter facilities. Neonatal calves are particularly vulnerable during transportation and marketing. Calves have behavioural needs that differ from needs of older livestock. For example, calves spend 18 hours per day resting. Young calves also have specialised feeding requirements, and may fail to recognise milk and water, even when they have been provided. Furthermore, calves respond differently to methods used to handle other types of livestock. Since calves lack strong motivation to herd together and lack strong fear reactions, they cannot be driven away from handlers. Neonatal calves are also particularly sensitive to pathogens and environmental temperatures. In the United States, legislation protecting the welfare of surplus calves is limited. The dairy industry seems unable to address this issue, since the low value of surplus calves provides producers with little economic incentive for improvement. Countries in the EU have developed legislation in response to the welfare problems associated with transportation of young calves, and Canada has developed recommended codes of practice. Possible mechanisms for improvement within the US dairy industry are discussed.”*

HSUS is opposed to veal crates and supports group housing of veal calves. They believe that the veal crate is confinement at its worst as calves cannot step forward or backward and cannot turn around. At veal industry conferences over the past few years industry advisers have told producers that they need to take heed of what is happening in Europe with veal crates, that is that they are being phased out.

One of the barriers to “humane” food products in supermarkets is price. When asked, people say that they would pay more for “humane” food, but in practice many of them do not. However there is still enough demand to make it viable to sell “humane” food products.

HSUS believes that industry has done a good job in separating farm animals from the end food product and desensitising the public to animal suffering during production of food. To address this, HSUS operates “National Farm Animals Awareness Week”. During this week HSUS disseminates interesting facts about behaviour of farm animals to get people to relate to them in the same way that they relate to

companion animals. HSUS aims to encourage the public to support humane treatment of farm animals by demonstrating that they are social, that they interact with each other, humans and other species.

Farmers will argue that because they rely on animals for their livelihood, they are not going to compromise the welfare of those animals and will do what is best for the animals. HSUS describes this as “the production myth” because factory farm profits depend on the optimal use of labour, space and equipment and not on the well being of individual animals. HSUS argue that animals have “been selectively bred for productivity at the expense of their well-being and are worn out in a fraction of their natural life spans” and “the reality is that drugs, hormones and other chemicals are routinely administered to animals in intensive confinement systems to mask stress and disease and to speed growth”.

### **Humane Society International – Neil Trent**

Ten years ago HSUS developed an international arm called Humane Society International when they realised that most issues they dealt with in the US had a ripple effect across the world. HSUS could provide a benefit to the animal movement in the world scene by utilising HSUS expertise developed in the US and exporting it. Humane Society International has an office in Sydney managed by Michael Kennedy.

### **United States Department of Agriculture, Food Safety Inspection Service (FSIS), Robert Brewer**

The mission of the Food Safety and Inspection Service (FSIS) of the United States Department of Agriculture (USDA) is to assure the safety, wholesomeness and proper labelling of meat and poultry for the end-user and consumer. FSIS only inspects federally licensed slaughter establishments, a FSIS veterinarian is Inspector in Charge of each of the slaughter plants, some of the big slaughter plants have four veterinarians. Meat from federally inspected plants can be shipped anywhere in the world. Most state slaughter plants are small, generally killing between 6-30 head per day, State plants can only sell product within their own state.

There are 20 slaughter plants in the USA that kill 80 per cent of feeder cattle between them. A number of them kill 6-7,000 head per day in two shifts. Some plants are located close to feedlots and some have a policy that they will not haul cattle more than 50 miles and will not load in the dark.

Audits of slaughter plants by major meat-buying customers has motivated the meat industry to self regulate to improve handling and stunning practices. In February 1999 a representative from McDonald’s Corporation stated that their Hazard Analysis Critical Control Point (HACCP) Team, which audits supplier slaughter plants for food safety, would add animal handling and stunning audits to their program. Wendy’s International Inc also started animal handling and stunning audits of supplier slaughter plants. Since then one large slaughter plant that had deficiencies in handling and stunning practices has been removed from the McDonalds Corporation approved supplier list and deficiencies have been corrected in other plants. McDonalds will no longer use meat from suspect cattle (lame, poor condition, cancer eye etc). (These cows are probably being marketed earlier or going elsewhere to state slaughter plants or Mexico.) Industry has started to self regulate.

With respect to the management of new born calves, Dr Brewer advised that in his experience in California, a lot of calves go to slaughter on the day that they are born and are unlikely to have received colostrum. However it would be unusual for calves, at least in California, to travel a distance greater than 50 miles. Some calves die en route some cannot walk off the truck.

Hide is kept on the carcass of many calves based on tradition, FSIS tries to discontinue the practice, however the “hide-on” lobby is powerful and they believe that the end result is “a better looking cut of meat.” Use of electric goads on bobby calves is rare in the US, calves do not respond. Calves are subject to the Calf Antibiotic Sulphur Test (CAST) and there is a “fairly high residue problem in these calves”.

There is no minimum standard for new-born calves “they go to the market too quick and rely on the good graces of the fellow that is running the calf pick up”. Dr Brewer advised that Americans are independent and “don’t like government or anyone telling them how to run their operation” therefore there are few industries that have developed codes of accepted practice which describe minimum

management standards. One exception is the American Veal Association which describes standards for special fed veal. Dr Brewer advised that some farmers get sensitive about USDA Animal and Plant Health Inspection Service (APHIS) staff coming onto their farms, farmers will say “unless they have gone to the bank and borrowed the money, they do not know what I am up against here”.

Dr Brewer believes that there should be no need for legislation to protect farm animal welfare in the USA. People are in the business of using animals to produce food have an interest in maintaining good standards of welfare for those animals (HSUS describes this argument as the “Production Myth”). On the other hand he suggested that it might be in the best interests of countries importing food into the USA to protect their market with animal welfare legislation and ensure that the legislation is enforced.

### **United States Department of Agriculture Animal and Plant Health Inspection Service (APHIS) Animal Care Unit, Dr Ron DeHaven**

APHIS is one of the 30 or so agencies within the USDA. Within APHIS there are five units:

- 1 International Services
  - staff in 30 countries
  - ensures animal and plant products imported into the US are free from disease
  - opens export markets for the US
- 2 Veterinary Services
  - programs for endemic disease control (brucellosis, tuberculosis, pseudo rabies)
  - major role in exotic disease response
- 3 Plant Protection and Quarantine
  - manages domestic plant pests
  - excludes foreign plant pests
- 4 Wildlife Services
  - manages predators that affect livestock
  - manages pest animals (eg bird at airports)
  - formerly named animal damage control
- 5 Animal Care

There is an Administrator (currently Craig Reid) and Associate Administrator (currently Bobby Acord) at the top of the organisation. The Chief Veterinary Officer (CVO) is the head of Veterinary Services. If the Administrator or Associate Administrator were veterinarians they could be the CVO.

With respect to Veterinary Services, the US is divided into East and Western Regions. The Western Regional Office is located in Fort Collins Colorado, the Eastern Regional Office at Raleigh, North Carolina. Veterinary Services has an office in each state, headed up by an Area Veterinarian, under the direction of the appropriate regional office. Area veterinarians interact on a daily basis and are sometimes co-located with the State Veterinarian (employed by the State Department of Agriculture). Domestic disease eradication eg brucellosis, is a joint program, in these programs federally employed veterinarians and state employed veterinarians are indistinguishable.

Animal Care is the smallest of the 5 APHIS units, however it attracts the most public and media interest. The Animal Care Unit administers the Animal Welfare Act and the Horse Protection Act.

The Horse Protection Act was primarily intended to protect the Tennessee Walking Horse, a performance horse judged on its high stepping gait. Trainers will obtain the desirable gait by intentionally injuring the front of the pastern just above the coronary band. A chain is placed around the pastern and when the chain strikes the injured point the horse steps with an accentuated gait. This is a 30 year old law intended to eliminate this practice, so far “it has controlled it somewhat”.

Ninety five per cent of the units’ resources are allocated to the administration of the Animal Welfare Act to protect cats and dogs and animals in biomedical research, exhibits, zoos and circuses.

The Act protects many animals not raised for food and fibre and was passed in 1966 largely to protect the welfare of dogs and cats following publicity about kidnapping of pets for research and about poor conditions under which dog dealers kept animals. This law regulated dealers who handle dogs and cats, as well as laboratories that use dogs, cats, hamsters, guinea pigs, rabbits, or non-human primates

in research. Congress has amended the Act in 1970 (to regulate other warm blooded animals when used in research, exhibition, or the wholesale pet trade) in 1976 (to prohibit most animal fighting ventures and regulate the commercial transport of animals), in 1985 (to improve standards for laboratory animals by issuing additional standards for the use of animals in research) and in 1990 (to authorise the secretary to seek an injunction to stop certain licensed entities from continuing to violate the Animal Welfare Act while charges are pending and to provide additional protection for dogs and cats obtained from animal pounds or shelters, auction sales, or from any person who did not breed or raise them on his or her premises). Each amendment has expanded the role and responsibility of the Animal Care Unit.

Farm animals are exempt from the purview of the Animal Welfare Act, with the exception of farm animal used in research. There is no federal, on farm, regulation of farm animals. Every state has anti-cruelty laws that vary from state to state. Level of enforcement also varies from state to state.

The farm animal industries have a strong lobby group and are almost an untouchable area. To many in the farm animal industries it is unthinkable that federal government would tell farmers how they should manage their livestock. This situation is very different in Europe and Europeans are trying to make animal welfare a trade issue.

The USA does not want to open itself up to “on the farm standards for animals and to potentially open the door for those kind of issues to be directed at trade”. India recently proposed a summit to develop multi-lateral animal welfare standards to cover companion, research and farm animals. The USA will be considering its position carefully before deciding whether to participate or not.

USA government has encouraged industry to self regulate, the National Cattlemans’ Beef Association has developed industry standards for care and housing, the American Veal Association has done the same in response to very negative public opinion.

The veal industry came close to on farm regulation when veal calf production was given a lot of national media attention. The public was abhorred by the conditions that animals were held in and by the fibre and iron deficient diet. Bills were introduced before congress to regulate veal production. Largely in response to that potential for regulation, the industry wrote guidelines to self regulate. “There are varying opinions as to how well they do that, but they have done it well enough to defray an effort to introduce federal legislation”.

The Downed Animals Protection bill has been introduced before the Agricultural Subcommittee and is basically “dead in the water”. The bill is unlikely to pass from the Agricultural Committee who are reluctant to actively work on animal welfare legislation, to Congress. Video footage was taken in a sale barn in Minnesota, the video showed live cows frozen to the ground , being dragged by large equipment and being very cruelly handled. The video attracted attention that resulted in the introduction of the bill.

New legislation introduced by a member of congress will be referred to the appropriate committee. If the legislation is introduced before the Senate and it is an animal welfare related issue, it will be referred to the Senate Agricultural Committee, if it is introduced by a Congressman of the House of Representatives, it will go to the House Agricultural Committee. The relevant committee gives a recommendation to the whole House of Representatives or the Senate. If the committee does not want the legislation to go anywhere it does not get out of committee. The Agricultural Committee is strongly beholden to the agricultural industries and the philosophy of self regulation.

If there is enough video tape and enough public concern, agricultural industry opposition to farm animal welfare legislation may be overcome and Agricultural Committee may act and give a recommendation to the whole House or Senate in favour of the new legislation. This approach avoids over regulation that could occur if all laws suggested by special interest groups were enacted.

Although there is no federal regulatory oversight of farm animals welfare, increasing concern and visibility of farm animal welfare issues has led to the formation of a group within in United States Department of Agriculture (USDA) called the Farm Animal Welfare Task Group. This is a senior level group made up of:

- the Under Secretary for marketing and regulatory programs
- the Administrator of APHIS
- the Administrator of FSIS
- the Under Secretary for Food Safety
- other senior officials

At this forum animal protection and industry groups can come to the USDA and air farm animal welfare issues, even though there may not be any specific regulatory intervention. It was in response to some of these concerns that an initiative started with Temple Grandin relating to stunning practices in meat plants. Dr Grandin pointed out the inadequacies of the Humane Slaughter Act and FSIS has responded and is probably doing a better job today than it was.

The Farm Animal Welfare Taskgroup also identifies the need to provide funding for research into specific animal welfare issues.

Animal protection groups would prefer to have calves slaughtered at birth or soon afterwards than for them to be put in veal crates in what they consider to be deplorable conditions. Veal industry detractors take images and practices from 10-15 years ago and say these outdated practices are occurring now.

Peter Singer of Princeton University heads up a coalition of Animal Protection Leagues called “Animal Rights International”, membership includes Humane Society of United States (HSUS), American Society for the Prevention of Cruelty to Animals (ASPCA) etc. At the time of my visit, Animal Rights International and the Farm Animal Welfare Taskgroup were to meet to discuss the enforcement of the Humane Slaughter Act. Peter Singer was bringing Gail Eisnitz, author of “Slaughterhouse” to the meeting.

Animal Protection Groups are categorised as either animal welfare organisations (eg HSUS) or the more radical animal rights organisations (eg People for the Ethical treatment of Animals (PETA)).

### **Brussels, Albert Cobb Veterinary Attache Australian Embassy / Andrea Gavinelli European Union**

In Western Europe, animal welfare issues have achieved a high profile, leading to large scale public protests and petitions signed by millions on issues such as live animal transport. Improved legislation and procedures has lead to comparatively high animal welfare standards in the European Union.

A public campaign sought to have animals classified as sentient beings rather than products within European Treaties. As a result, in 1997, the EU adopted a protocol on the protection and welfare of animals, wherein the Community and Member States undertook to pay full regard to animal welfare in forming and implementing relevant policy and legislation.

There is increasing concern that this progress may be threatened by the World Trade Organisation (WTO). The WTO was established in 1995 superseding the regime created by the General Agreement on Tariffs and Trade. Since then there has been controversy about the impact of international trade rules on domestic policies with non-trade objectives.

Nearly all animal welfare concerns arise from production methods that are not detectable in the final product, known as non-product related Process and Production Methods. There is nothing in the WHO that prevents a country from raising its own welfare standards however there are two significant trading obstacles to raising standards:

- the cost of production increases, leaving producers competing against cheaper imports produced by less animal friendly methods
- raising animal welfare standards is closely linked with non-product related Process and Production Methods (PPM's) but any distinction among products based on methods of production is disallowed under the articles of the General Agreements on Tariffs and Trade (GATT)

Articles of the GATT relevant to animal welfare issues, which is now incorporated into the WTO, are as follows.

Article I requires that a contracting party shall not grant any advantage, favour or immunity unless it is also granted to all other contracting parties.

Article III states that “like products” from external sources must be treated the same as domestic goods. This has been interpreted as meaning non-product related process and production methods (where the process, for example the treatment of animals used in production, is not detectable in the end product) should not be used to distinguish between products.

Article XI limits the power of member countries to ban the import of products unilaterally.

Article XX specifies the extent of the exemptions to these provisions providing that “Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination among countries where the same conditions apply, or as a disguised restriction on international trade, nothing in this agreement shall be construed to prevent the adoption or enforcement by a party of measures

- a) necessary to protect public morals
- b) necessary to protect human, animal or plant life or health
- g) relating to natural conservation of exhaustible natural resources”

Animal welfare measures are most likely to fall within the scope of Article XX a) and b), measures to protect or conserve wild animals would typically be covered by Article XX g).

Changes under the Uruguay Round of GATT whereby offending governments have to amend legislation, pay compensation or risk retaliatory actions have sharpened the potential impact of trade rules on animal welfare legislation.

Exemptions to free trade rules have been interpreted narrowly by panels and WTO rules applied in a manner that has started to undermine measures taken to protect high welfare standards. For example the European Commission proposal to improve conditions in which laying hens are kept, in particular by increasing the minimum size of living space for each hen will incur high set up and production costs. This will make eggs produced by third countries with lower welfare standards less expensive and increase the demand for cheaper eggs produced using methods worse than those the EU is proposing to phase out. The proposed improvement in EU policy will be undermined unless appropriate process and production methods distinctions can be made in relation to eggs imported from third countries.

This underlies the conflict between WTO rules and attempts to raise animal welfare standards. For goods produced under differing welfare standards to compete on an equal footing, non-protectionist trade-related measures may be needed.

The possible solutions include a complete prohibition on third country products. Less restrictive and more market orientated solutions could include tariff and tax adjustments to maintain market equilibrium, financial incentive to adopt higher welfare standards, improved market access for third country producers that meet domestic standards, rebatable tariffs to promote the take up of new production methods and various other forms of aid, grants and loans.

WTO members and officials have been reluctant to take this route and have proposed Article XX general exceptions, multilateral agreements and voluntary labelling schemes as alternatives.

Poland and the Czech Republic want to join the EU, over the next 3-4 years they have to address EU legislation. The Commissioner for Consumer Protection David Byrne has suggested that Poland give priority to picking up some animal welfare legislation, especially as it relates to animal transportation in the pre accession phase.

The European Commission and the Welfare States want animal welfare to impact on trade. There is a concern that if welfare standards are improved in Europe for laying hens, calves, pigs etc then third

countries such as Australia or the US, which may have lower welfare standards, will have a competitive advantage.

Labelling of products to identify the process by which food products are grown and letting the consumer make the choice is not seen as a solution. Welfare groups including the Eurogroup for Animal Welfare do not like the labelling option as it only impacts on a small percentage (up to 15 per cent) of consumers. The concept of free range eggs gets lots of support in surveys, but when it comes to paying extra money at the supermarket, consumers opt for the lower price of battery hen eggs.

The Eurogroup for Animal Welfare would like to handle welfare standards at the border and preferably have a third party equivalent status re welfare. For example importation of eggs would be prohibited unless accompanied by a certificate saying they were produced in a manner equivalent of better than methods of production in the importing country.

There is a notion that there should be international standards for animal welfare, however the European Commission does not necessarily see this as the answer because they realise that any standard that would be agreed internationally, would be a lesser standard than currently exists within their directives.

### **Veal production in Europe**

France, Italy and the Netherlands are the biggest veal producers in Europe. The French have the highest per head consumption of veal. There are environment concerns with regard to calf rearing in the Netherlands. The Netherlands also produce calves in Italy and sell technology into Italy.

There are differences in the way veal is produced in Europe, including carcass weight and colour. By tradition, Italy prefers white veal and Italian calves are fed milk with enough roughage to satisfy the European Council Directive on minimum standards for the protection of calves. Before the directive only milk was fed, this led to anaemia and animal health and welfare problems. The French prefer a pinker veal.

Throughout Europe, veal consumption is decreasing as consumer confidence declines. Consumer confidence is affected by awareness of the manner in which calves are kept, that is in crates. There are also concerns about antibiotic contamination of veal. The public believe that only minimum requirements are met and that this is not good welfare. It is becoming increasingly hard to eat young sentient beings who should be treated with great care, and in any case veal is an expensive meat and consumers are looking for alternatives.

For many years following the Second World War it was important to have meat on the table every day, the quality of the meat was tied up with traditional values such as white meat for rich people; being able to afford white meat inferred status. These values are now changing and veal is a meat to be eaten sometimes.

Calves cannot be transported unless their navel is healed (umbilical cord dry and fallen off), the directive on the minimum age for transportation is not currently described by days of age. Transportation times are generally limited to eight hours, however if the transport is equipped with a system to water stock, transportation times can increase to 14 hours.

Long distance transportation of calves is usually limited to neighbouring countries, however some calves are transported from the Netherlands to Northern Italy and calves are moved from Ireland to Europe by boat.

Current research on transportation needs to be reviewed and more research done before legislation is written.

Veal production is closely related to the market for milk replacer, big integrated companies have developed to manufacture milk replacer and grow veal. These companies understand that to remain profitable, they have to work on their image and upgrade farming standards including standards of animal welfare.

The European Commission and the member state working party will soon know more about the world's animal welfare legislation than any other body, they are currently examining the animal welfare legislation of 74 countries. This is the first time that animal welfare legislation of different countries has been compared. The comparison of legislation is based on technical, not legal issues.

Hopefully action plans will be developed from the best ideas, rather than an expose of what has been done or not been done.

Animal Welfare has some principals that are easy to address, the Five Freedoms are already well accepted around the world, they could be a starting point for agreed international standards on animal welfare. The biggest step is the recognition that an animal is able to feel pain, a common belief now held by many.

Animal Welfare is a young and emerging science if compared with animal health and public health. Some vet schools are only now starting to recognise this and are beginning to teach the principals of animal welfare and ethics.

### **European Union**

There are three phases developing and implement legislation in the EU. The first is the scientific phase, the second the legislative phase and the third, the inspectorial phase.

The EU would like the rest of the world to have higher welfare standards so that the EU can export competitively, at the same time they are having to wind back export subsidies to be WTO consistent because they cannot export to large parts of the world because their industry is too subsidised.

The EU is very nationalistic, for example in the United Kingdom, animal welfare legislation generally goes further than the European Commission legislation. In the UK, sows cannot be tethered, but EC legislation still allows it in the phase out period. The UK is currently spending millions of pounds in a media campaign to highlight to all their consumers that they have higher animal welfare standards than the Danes and Dutch etc.

Farming in the UK is expensive, not only involving animal welfare standards, but costs of labour, feed, land – at the end of the day the UK is going to be uncompetitive, they will eventually be net importers of a lot of agricultural products.

The commission is concerned that they cannot keep up the momentum of improving welfare standards if industries keep pointing to lower standards and no progress in third countries. Some of the member states do not comply with minimum legislation.

The Commission for the Food and Veterinary Office Inspectorate is starting to do visits to farms, checking on cattle identification, cattle movement databases and compliance with Feed Stuff Directives etc, they are also gradually moving into the animal welfare arena.

The problem with animal welfare and the WTO is that a large proportion of WTO members are developing countries and do not have the ability to be so particular about animal welfare, their concern is food security (ie having sufficient to eat).

#### Transportation directives

The live transport directives and subsequent modifications are all about training livestock handlers, feeding, watering and resting after eight hours. However they are now focusing on ways of avoiding having to stop (to prevent co-mingling of animals at staging points and subsequent risks to health of animals).

#### Age constraints re the transportation of calves

EU directives are minimum standards and each country draws up its own legislation. A couple of countries have specified 14 days of age as the minimum age for transportation. There is impending legislation that will require cattle to be tagged within three days of birth and for records to be kept. In

theory, if you have an ear tagged animal and the system is working correctly, the age of the animal can be checked against the record.

#### Compliance with Directives

The EU generally requires member states to write a report on a two yearly basis of the outcome of their Member State Inspection of their farms. The commission has a Food and Veterinary Office, based in Dublin, this is where approximately 200 inspectors, two thirds of them veterinarians, will be based. Their task will be to inspect member states and third countries (such as Australia).

#### **Provimi at “De Viersprong” an experimental farm in Kerkdriel, Paul Veth**

Provimi makes minerals, premixes, especially feeds for piglets and calves, milk replacer is an important part of the operation. Provimi was the first company in Holland to use computers in the formulation of livestock feeds. Provimi was established in the 1930's, it has interests world wide and is now looking to establish markets in Australia.

Provimi is currently expanding into fish feed and building a “stable for fish” and setting up a dairy operation with 30 dairy cows to be fistulated for ruminant work.

Currently they have layers, broilers, sows and calves at this experimental farm.

Until 1991, Provimi contracted with farmers to rear veal calves. Provimi withdrew from contractual arrangements with farmers calves as the veal business was not profitable, especially in the past 4-5 years. Provimi now have only 3 “stables” 400 calves all together and keep a small interest in the contract business. Most of the milk replacer sold by Provimi is to veal farmers who are not contracted, however 99 % of veal produced in Holland is contracted.

There is a general trend in Holland and Europe to eat less meat. Veal is following that trend. From February 2002 veal growers were losing money, estimated losses were between 110 –200 guilders per calf.

Veal production is a cyclic industry.

There are currently 1.2 million veal calves reared per year in Holland.

Currently have 1.6 million dairy cows, down from 2.5 million in 1985.

Currently annual production per cow is 8,500 litres, compared to 6,500 litres in the 1950's.

Human population of Holland is 14 million

1.6 million cows - 1.5 million calves

500,000 calves retained as replacements, leaving 1 million surplus calves, 750,000 are bulls, 250,000 are heifers

produce 1.2 million veal calves

95 % of the veal production is integrated. Two big companies control about 90%, together they produce about 1 million calves per year. There are 4-5 smaller integrated companies each having between 10,000 and 50,000 calves reared on contract.

Holland also imports calves from Poland, France and Belgium in order to keep veal stables full all year round. Peak calving in Holland occurs in autumn (September) to take advantage of higher winter milk prices.

There are between 10-20 veal farmers who produce veal at their own risk, most of these purchase milk replacer from Provimi.

Current price of a black and white Holstein calf is 500-550 Dutch Guilders (\$A400). The price is currently high because supply is short (500-550 guilders is the break even point if calculations are made on general markets for a finished veal calf). Normally a fair price would be somewhere between 250-350 guilders for a Holstein calf. If Dutch farmers had access to \$20 Australian calves, they would be very profitable.

Veal production is generally integrated, if veal prices are low, they are usually buffered by the milk replacer business.

Type of calves

Black and white Holstein calves

Red and white Friesian, still a milking animal, but with better meat characteristics. Red and White calves are worth 100 guilders more. Red and white genetics are moving more towards milking characteristics and some veal calf qualities are being lost

Belgian Blue and Belgian White grown to 16-18 months of age and fattened on corn silage and concentrates (not veal)

Pink veal production is increasing slowly, calves are grown to 300-310 kg live weight at 30 weeks old. They are weaned between 8-10 weeks of age and fed a dry diet, generally concentrate and corn silage.

95% of the veal produced in Holland is exported, mostly to Italy, some to Germany

Calves usually arrive at the veal "stable" when they are a week old at approx 42 kg live weight, their origin is known, as they are all tagged, however their history is not known (eg colostrum / antibiotics etc). Calves imported from Poland maybe between 1-6 weeks old.

In Holland calves are generally grown up to 26-28 weeks of age to 250-260 kg live weight and fed only on milk. (France has shorter growing times - 18-22 weeks). Calves are fed roughly 350 kg milk replacer and achieve a feed conversion efficiency between 1.8 –2.

Calves are registered, they can be audited through urinalysis for "forbidden products" such as antibacterial residues.

There is an overproduction of milk and skim milk powder in Europe and a subsidy is paid for skim milk powder to stimulate its use. To obtain the subsidy for the use of skim milk powder, skim milk powder has to be at least 50% of the final product. If milk replacer is made based only on skim milk, the feed cost is too expensive.

Skim milk powder currently costs 480 Dutch Guilders /100 kg, a subsidy of 150 Dutch Guilders is paid, leaving the price at 330 guilders. However this is still a very high price, compared with the cost of whey powder (100 guilders per 100 kg), delactosed whey powder (150 guilders per 100 kg) and plant proteins used in formulas approx 160 guilders per 100 kg. To take advantage of the subsidy on skim milk, but to overcome the relatively high cost of skim milk a two bag system has been developed, one with 50% skim milk powder, one with no skim milk powder. The contents of these bags are mixed on the farm (not in the factory) through this mechanism, the level of skim milk powder fed can be manipulated.

Feeding program

Starter (1-10 weeks) - starter milk and iron generally all bag 1 (50% skim milk powder)

Grower phase 80% bag 1 to 20% bag 2 – no iron added after 10 weeks

Finisher phase 50% bag 1 to 50% bag 2 to 40% bag 1 to 60% bag 2

Do not go lower than 15-20 % skim milk powder, the more bag 2 product (0% skim milk powder) used, the poorer the growth

In the past, veal calves have been fed a liquid diet only, now to be in compliance with welfare regulations small amounts of roughage are fed, usually corn silage or cereal grains inc barley, flaked corn or mixtures). Between 60-75 kg cereals and 150- 200 kg corn silage are fed over the total growing period.

#### Carcass weights

Live weights of 250- 260 kg dress to 140-155 kg carcass weight. Calves from this farm finish at 250-260 kg live weight, calves from commercial farms are generally 235-240 kg live weight at finishing..

In Europe payment is on a fixed ratio of dressed weight to liveweight. Pay on liveweight assuming dressed weight is 65% of live weight, however it is not.

Dressed weight for black and whites is 58-59%

Dressed weights for red and whites is 60-61%

Dressed weight for Belgian Blues is 63 %

Provimi worked with Walter Gardin for 6-12 months in the development of programs for pink veal, Provimi exported some concentrates to Australia.

Need to have a market for veal before embarking on veal production, there is fierce competition in the veal market in Europe and it is unlikely that there would be a market for veal from Australia.

The growth curve for a calf is pretty flat for the first four weeks, probably need to be kept for 6-10 weeks to for significant weight gain. It is unlikely that feeding calves for a few weeks extra from birth will be profitable.

Successful veal production requires a cheap calf, a very cheap feeding regime to keep feeding costs as low as possible and a market for the product. Keep it as simple as possible and as cheap as possible. If Australia is going to better utilise surplus dairy calves our beef industry is going to have to start thinking differently, instead of running a cow and calf, stop running the cow, instead rear 2-3 calves from the dairy industry.

Holland has a milk quota system. Generally Holland's milk replacers are less expensive than whole milk, but as the result of the quota system, 50% of dairy farms are still feeding whole milk to veal calves. This causes significant fluctuations in calf milk replacer sales, if a farm is over milk quota, milk replacer sales go down as whole milk is fed in place of milk replacer.

#### Housing

Individual housing in crates (boxes)

Group housing to be implemented in the coming years on all farms

Some group housing systems are computerised where each of the 120 calves in the group per group is recognised by the computer.

#### Pink veal

Fed milk replacer up to 8-10 weeks, then a 50:50 mixture of corn silage and concentrate to reach a finished live weight of 310 kg. The two big interests in white veal production in Holland also have an interest in pink veal. These two players are able to control on markets for milk replacer and veal and are only allowing the pink veal industry to develop very slowly. However Dutch farmers who traditionally produced red meat are changing over to pink veal as the result of low returns for red meat. The change over from red to pink veal production is easy and it is these farmers who are responsible for an increase in pink veal production.

The milk replacer industry controls veal farms, even so a change over from white to pink veal production is difficult, especially if white veal is produced in individual crates (boxes).

Milk replacer fed at 42 °C.

Mortality is generally 2.5 %.

In practice a lot of antibiotics are used when new calves come into a “stable”. Feed is often medicated at the start of the rearing process usually with oxytetracycline, medication is not provided in the premix.

Average growth rate is 950 – 1000 grams per day, growth rate slows at the end as calves get more anaemic, at the top of the growth curve they can grow 1500 grams per day.

Calves are not castrated or dehorned. They are generally not vaccinated, however some farms vaccinate for bovine virus diarrhoea (BVD) / infectious bovine rhinotracheitis (IBR).

Urine drinking is a problem in group housed calves

At this research farm, calves are individually housed for the first 6 weeks, partitions are then removed.

**Danish Agricultural Advisory Centre (DAAC) The National Department of Animal Husbandry, Jens Yde Blom, Rikke Engelbrecht Pedersen, Astrid Mikel Jensen, Arne Munk**

The Danish Agricultural Advisory Centre was built 10 years ago. In 1932, the National Farmers Union of Denmark and the Danish Family Farm Union decided that all knowledge should be in one place.

The DAAC is a private company, owned by farmers. Denmark has a long history of farmers making their own organisations and companies. This dates back to 1864, when the southern part of Jutland was occupied by Germany and the remaining land had to be better utilised, coupled with declining wheat exports because of the poor quality of Danish wheat. Around that time a decision was taken to concentrate on pigs and milk as there was a huge market for bacon and butter into the United Kingdom.

Denmark currently produce 22,000,000 slaughter pigs per year.

Human population of Denmark 5,000,000

One hundred years ago Danish farmers formed cooperative creameries, there were 2,500 of these over Denmark, many more than exist today.

General education of Danish youngsters, even today, takes into consideration that they should be available to work on farms during the summer months. Education is concentrated in the winter months.

The DAAC has a farmer elected leadership, the National Farmers Union of Denmark and the Danish Family Farm Union form the Executive Committee of the National Committees, there is a National Committee on pigs, cattle, horses etc etc.

The main task of the DAAC is to offer specialised advisory services. There are two layers of agricultural advice in Denmark, the DAAC is the upper layer, the other layer are typically local advisers situated in centres around the country, employed by farmers, generally the local Farmers Union and not subsidised by government.

DAAC has a government subsidy that amounts to approximately 20% of the annual turn over. DAAC communicates knowledge and information to local advisers and farmers, develops new tools and concepts and undertakes research and investigation. Their main task is to take research and do what needs to be done to get that research applied on farms. DAAC also offers in-service training for local advisers.

Jens Yde Blom and a staff of 90 work in the National Department of Cattle Husbandry. This department is directed by and answerable to the National Committee of Cattle Husbandry of 22 farmers. The National Department of Cattle Husbandry, apart from working on development of

agricultural systems and training local advisers, also liaise with government on legislative issues. The department is divided into six program areas:

- 1 Development of computer programs / registration
- 2 Nutrition and health
- 3 Production systems
- 4 Breeding systems
- 5 Breed associations
- 6 Small ruminants (only 150,000 breeding sheep in Denmark)

The National Breeding programs directed from this office make all calculations on breeding indexes etc

Typical of Denmark, the less people in the field the more in administration. More and more of the tasks that were done in the field by local advisers are now being performed by the central office because it is more efficient and because the country is small and administrative systems are well structured.

#### Production methods for cattle

More than 30% of cows are loose housed

Nine out of ten new cowhouses are based on loose housing for 125-150 cows

Less than 20% use complete diet mixtures

More than 75% of feed for cows is produced on farm (grass, beets, wholecrop, corn, grain, peas and rapeseed)

No growth promotants are used in milk production

More than 10% of farms were organically farmed in 2000

#### The size of production

11,000 herds with approximately 685,000 milking cows producing 4,200 tons of milk and approx 140,000 tons of beef

15,000 herds with approx 120,000 suckler cows producing 40,000 tons of beef (usually hobby farms) co-operative societies handle approximately 90% of production.

One company, MD Foods, within the dairy sector handles more than 90% of the production. MD Foods has recently merged with a Swedish Ala Foods and now owned by Danish and Swedish farmers; a necessary move to be in the market place in five years time.

One company, Danish Crown, within the meat sector, handles more than 65% of production.

Two thirds of agricultural production is exported to primarily the EU countries, the Middle and Far East.

In order to farm in Denmark a "Green Card" is required, the "Green Card" is obtained after three years in Agricultural College.

There is a significant amount of tax to be paid every time a new generation takes over a family farm.

#### Land use in Denmark

65% of land in Denmark is farm land

22% cities roads etc

2% lakes

11% forest

11% of farming land is "set aside" to reduce agricultural production (as there is a surplus in Europe), the area "set aside" is to increase to 15% in a few years. Nothing can be grown on the "set aside" land, however "set aside" land may be fallow and may be rotated.

Farming land is worth \$US10,000-\$US11,000 per ha. Pig farmers need land to dispose of effluent, dairy farmers have to compete with pig farmers if they wish to buy additional land.

Dairy farms – average holding size

Allowed stocking rates are related to environmental issues including nitrogen management. No more than 2.3 animal units per hectare, reducing to 1.6 animal units per hectare in the next three years. An "animal unit" is equivalent to one cow plus calf. However if a farm has more than 70% of the farm area under pasture, then 2.3 animal units per hectare can be maintained beyond the next three years. DAAC are currently negotiating with government to allow individual agreements to be struck if effluent is handled efficiently and nitrogen use is optimised.

The number of dairy herds is declining, however herd size is increasing

Currently there are 11,000 herds with approximately 685,000 milking cows, by 2010 it is forecast that there will be 5,200 dairy herds with approx 560,000 dairy cows.

Animal Health in Denmark is administered by the Ministry of Foods. The Ministry of Foods contains The State Veterinary Service, including two State Diagnostic Laboratories (The Virus Institute on a small island near Sweden and the National Diagnostic Laboratory in Copenhagen) and ten State Veterinary Officers – one for each of ten districts.

There are approximately 900 veterinary practitioners, approx 350 country practices and 55 cattle specialists requiring a two year on the job course and participation in large animal practice for at least three years.

Disease control programs

Salmonellosis is highly associated with ambient temperature during summer months, approximately 200 cases recorded every year.

Denmark is currently trying to eradicate bovine virus diarrhoea (BVD), through test and slaughter of viraemic animals (now required to cull viraemic animals within four years). Usually work with cooperators initially and deal with non-co-operators at the end of the program with legislation.

95% dairy herds are free of BVD

Bovine spongiform encephalopathy (BSE)

Since 1929 there has been a regulation on heat treatment of meat and bone meal, since 1933 Denmark has not allowed the importation of any meat and bone meal. First case of BSE was in an imported animal. All 450 imported cattle were ear tagged, when they came to the slaughter house, the owner was compensated for the animal and its carcass was incinerated, no follow up investigation was undertaken, the imported animal was simply taken out of the food chain. There are still about 50 imported cattle left, they are watched very closely.

In Feb 28 2000, one case of BSE was confirmed in a Danish bred cow in a small operation in Northern Jutland, still do not know the origin of the case, possibly a spontaneous case. All feed sources for the herd were checked, no association with scrapie in sheep. All veterinarians alerted to the requirement to investigate suspect cases.

Denmark check 12,000 animals at knackeries, by an ELISA test on cerebrospinal fluid developed in Switzerland. Knackery products are now used for pet food only, however in the past they have also been used for pig and poultry food.

Databases

For the last ten years, Denmark has had a Central Cattle Database containing all information on breeding, milk production and disease surveillance. Until 1998, only animals in the Milk Recording Program were included, but now, EU regulations require that every member state has a data base of all animals, including pigs and poultry. In Denmark the DAAC manage this database, known as the Central Farm Animal Database, on behalf of government. A new entry on the Central Cattle Database is automatically transferred to the Central Farm Animal Database. All movements of cattle are

recorded, all cattle are tagged, this tag is retained for life. If an animal is transferred to another farm, details of the transfer have to be registered with the Central Cattle Database.

Farmers can access the database from their computers and complete their own data entry. Whoever enters the data has free access to that data, anyone else wishing to access the data needs a permit from the owner of the cattle whose data is to be accessed. Resulting from a new regulation introduced in 1998, information to be entered must not be more than seven days old.

Data entered onto the Cattle Database includes:

- milk recording information
- slaughter house reports (slaughter weight, carcass evaluation, disease data etc)
- milk factories
- veterinarians (from May 2000 it is compulsory to record antibiotics used on the farm on a per animal basis – Ministry of Foods wants to know what drugs are used on what properties - data is analysed at the farm level to track changes in antibiotic use)
- artificial insemination data

A huge amount of data is collected on this data base, it can be used to extract action plans for an individual farmer, statistics for the advisory service and to give a very accurate picture of the whole industry.

#### **Danish Calf Mortality Study - Astrid Mikel Jensen**

Animal welfare and economic problems occur as the result of a calf mortality rate of 15 % per year. Calf mortality rates are rising and are currently 11% in Danish Friesian heifers. Calf mortality rates cannot be compared with other countries as other countries do not have any data.

In Denmark, this information is available from the data base, as all births, whether alive or still born, have to be registered with the Central Cattle Database within 7 days. Birth code descriptions include, defective calf, live calf, live calf early born, dead within 24 hours, dead after 24 hours, stillborn, abortion, destroyed as new born. The destroyed as new born (2.3% (18,454) calves in 1998 - mainly Jersey bulls).

A Quality Assurance Program for Raising Dairy Calves started in 2000 with the aim of reducing calf mortality. The extension focus over the past 20 years in Denmark has been on mature cows and older heifers, with very little focus on calves.

One objective is to explain management methods responsible for calf mortality. Significant calf losses arise from diarrhoea and pneumonias including bovine respiratory syncytial virus (BRSV). The database is interrogated and farms are surveyed to capture management practices that cannot be recorded on the database.

#### **Sale of bull calves**

A recent regulation requires calves be two weeks old before they can be transported from their property of birth. Current sale price \$US 125 for a Friesian calf between 2-4 weeks old.

Some are sold to specialised calf fattening herds (have about 200 intensive units in Denmark with a large number of calves). Output from these units is “baby beef” also called pink veal or veal rosa, these calves are slaughtered at 8-9 months old.

Some bull calves are sold to the Netherlands for white veal production, the Dutch pay 200 Danish Kroner more (\$A1 = 4.5 DK)

Salebarns (saleyards) are disappearing from Denmark. One survives in Southern Jutland, more by tradition than function. Cattle are sold on networks, agents are still involved, but the saleyard step is omitted from the process. Agents know who is selling and who wants to buy.

Some specialised baby beef farms have their own trailer and they have specific farms which supply them with bull calves.

Cull animals nearly all go direct to slaughter.

Average age at first calving is ideally 24 months, however it is more like 28 months

### **Beef production and subsidies, Arne Monk**

Number of cattle and total beef production has decreased, currently 130,000 meat breed suckled cows (670, 000 dairy cows)

Danish Crown slaughter 65% of cattle, Zealand is the next biggest slaughter house and there are 7-8 smaller slaughter houses.

European Economic Community – Reform of Agricultural Policies

A large proportion of the European Community budget is spent to support farming, this has created a major problem in the context of world trade, hence some reforms are needed.

EEC has 15 member countries, all with different interests, Europe needs to drop the price of beef by 30% to be competitive on the world market, however governments are afraid to drop support to farmers, especially in France. Farmers are compensated for low commodity prices by subsidy payments. The EU guarantees a minimum price.

Every farmer has an individual ceiling of “premium (subsidy) rites”, which is like a quota. Farmers can purchase “premium rites” from each other. In Denmark, there are only 112,000 premium rites for sucker cows, each country has their own ceiling, without this system there would be an overproduction.

There is also a slaughter premium for every animal slaughtered at 8 months of age or older.

Each country also receives an individual amount from the EU which can be distributed to farmers as the country wishes, in addition to slaughter premium and premium rites.

Density of livestock units

Farmers can also receive an extensivication payment if their stocking rates are low. The aim of this subsidy is to slow or reverse growth of intensive farming, but to keep people in the country side to ensure that agricultural land does not degrade. Money is now directed towards sustainable agricultural production

Farmers have to manage their farming enterprises to maximise their premium payments and subsidies – ie they have to “farm the subsidies and premiums”, subsidy optimisation is the farming game.

The European policy is to decrease veal production through subsidies, however this is not succeeding.

About 60,000 Danish calves are “branded”, that is raised under a trade mark which specifies production standards. If farmers want the special premium for bull calves, the calves have to weigh more than 185 kg dressed weight.

Economics of veal calf production

White veal is not produced in Denmark. There were some attempts to grow white veal in the 1960's, however there were always problems with health and welfare and eventually these systems were abandoned.

Calves cannot be transported from their property of birth under two weeks of age. However it has been suggested that calves moving into Danish Veal / baby beef programs should be moved a little earlier. DAAC are trialing movement of calves within the first week of life, into individual crates until two or

three of weeks of life. Current thinking is that calves should either be moved shortly after birth or at three months of age.

Slaughter guidelines for the 20,000 Jersey bull calves, prepared in consultation with welfare agencies, have been sent out to all Jersey producers. Captive bolt guns cost between 500-700 DK (ie they are cheap)

Danish calf trademarks include the Government Trademark and the Friland (meaning calves have access to outdoors) trademark, 95% of branded veal calf production is for domestic consumption. There are 13 brands, including the Government Brand, which has the highest standards, however consumers are not prepared to pay more for higher standards.

The consumer in Denmark spends only 13% of net income on food. The media are concerned about animal welfare on behalf of the consumer, the consumer is more likely to choose the cheaper cut of veal in the supermarket.

The Government and other brand name signifies that the animal has had a good life, the key point of trade names is that the animal has been housed on deep litter and has adequate space and social contact (from four weeks of age calves have to be run in groups).

Space allowances

There are EU regulations detailing space allowances for different age groups, however before EU standards were developed, Denmark had their own standards which allow more space per animal (called the Danish Recommendations on the “green Bible on space recommendations”). There is a National Office of Buildings and Structures, as soon as new standards are agreed, local advisers are informed, to enable the new standards to be put into effect for new and reconstructed premises.

95% of the total production of young bulls is exported to Italy, Portugal and Greece, exported as whole carcasses.

### **Baby Beef Production System at Jelling**

This operation produces calves under contract to Friland Foods (Friland started marketing pigs that had access to the outdoors, now calves that have access to outside are reared and sold under the Friland brand).

Young calves are purchased from neighbouring dairy farms

Farm size 80 ha – adequate size for 650 calves

Mortality – 6 per cent

Calves come onto the farm between 2-7 weeks of age and are housed in groups of 10-12 on straw with access to the outside. They are fed milk for about 4-6 weeks depending on size and age. Aim to turn off a 330-340 kg liveweight calf at about 9 months of age – dressed weight 180 kg.

Price 24 DK / kg dressed weight. If dressed weight exceeds 180 kg the price falls to 13 DK / kg.

Starter pellets contain 16% protein, at 200 kg liveweight the percentage of protein in the diet is reduced.

No subsidy is available for baby beef.

Currently contracted to supply 520 calves per year to Friland, down from 650 calves per year due to over supply.

To compensate for loss of contract, this operation is now growing young bulls to 450kg liveweight. Quick growing bulls are selected for this purpose – attracts a subsidy from the EU the sale price is 17DK /kg dressed weight. Pellets are provided ad lib, space requirement 3 square meters per calf, milk replacer contains 60% skim milk powder.

### **Thomas Jorgensen's Farm**

Produce 1100 calves per year, 800 under the Government Brand, 300 grown to 440 kg (young bull) these attract a subsidy from the EU. This operation sources calves from 135 different farms and aims to bring in 90 calves per month. Calves usually spend about one month in small houses (6x6 meters). Houses face south and are well ventilated.

If live weight exceeds 55 kg they are fed milk once daily, if live weight is less than 55 kg they are fed milk twice daily. Calves have access to calf muesli while being fed milk.

The temperature of small calves is taken three times per week (Monday, Wednesday and Friday) calves are treated with antibiotic if their temperature exceeds 39.5 ° C. Pneumonia is of great concern and a major health issue.

Starter pellets containing 17% protein are fed for about the first three months, then finisher pellets, containing 14 % protein are fed.

Groups sizes are kept as small as possible, usually 8-10 per pen. Fastest growing calves are moved to slaughter at 6-7 months at 300 kg live weight, most are finished by 8 months in the system.

Calves grow at about 1200 grams per day. Mortality normally 3%, currently 2% - having a good run. Industry mortality rate 6%

Price for the product is 24 DK/kg dressed weight (4.5 DK = \$A1)

Has done some trail work with feeding stations and transponders / computers.

### **Copenhagen Veterinary School - KVL, Jens F Agger Epidemiologist, Henrik B Simonsen Animal Ethology and Welfare**

Henrik Simonsen teaches Veterinary Jurisprudence and Animal Welfare. In his spare time he is deeply involved in animal welfare work with the biggest animal welfare society in Denmark.

Denmark has a major ethical problem with the killing of day old calves. Another problem is the transportation of day old calves to Holland. Denmark are trying to increase the number of dairy calves raised for beef in Denmark and hence reduce the number of dairy calves exported to Holland.

White veal production is not prohibited in Denmark, it is regulated on the European Directive. Denmark could produce veal if they wished. White veal production was introduced in the mid 1960's, it was soon recognised that this way of treating calves was not acceptable in Danish society.

Danish treatment of calves is done according to the EU Directive, in addition general Danish Animal Welfare Laws prescribe that animals have to be treated according to their behaviour and physiological needs. Major regulatory change to improve welfare is not easy to achieve in Denmark, Danish industry does not want standards higher than those already imposed on it by the EU as increased costs of production would make their agricultural exports less competitive.

The requirement to dehorn calves with sedation and local anaesthetic is a specific Danish regulation and not required by any EU directive.

Branded products have specifications of bedding, space per animal etc, some farmers produce at a higher standard and some brands are recommended by the Animal Welfare Society.

### **Management of complaints of animal cruelty in Denmark**

For grazing animals complaints usually occur during summer when animals are grazing out of doors. Very few complaints in the poultry and pig industries where animals are housed. The Danish Animal Welfare Society have a network of local representatives (listed in the telephone book). The local

representative will visit to see if the complaint is substantiated. If a problem exists the police are called as Animal Welfare Regulations are administered by the Ministry of Justice. The police normally ask for the assistance of the government veterinarian – police have the power under the regulations and the veterinarian has the expertise.

Lobbying re animal welfare issues in Denmark – the public can raise a campaign or the media can raise a campaign to promote public response to pressure politicians to change legislation.

The Veterinary School has a Professor of Bioethics (a philosopher) employed a couple of years ago, he is establishing a course on bioethical issues – probably one of the few professors in that area of all the veterinary schools all over the world.

In the USA there is little consideration for the welfare of production animals, however there is major consideration for the welfare of companion animals, similar trends can be seen in Denmark.

Sick animals must be treated professionally or killed humanely. The Danish Animal Welfare Society promote the prompt attention for a sick animal, attention can be provided by the owner, however if the animal fails to respond to treatment, a veterinarian must be called or the animal must be humanely destroyed. Simonsen thinks that it would be possible to have this in a general European Union directive on farm animals.

### **Operation and structure of animal welfare societies in Denmark**

There are many small associations, some of them with specific aims, eg for horses, cats, lab animals. The biggest organisation which has a network of local representatives, now 125 years old, is called the Danish Animal Welfare Society (DAWS).

DAWS has 50,000 members with local representatives and headquarters in Copenhagen, working with all kinds of animal welfare problems in all species. DAWS is funded by gifts and donations (in 2000 there was government support for rescue work for animals injured on roads).

The Veterinary School teaches ethology (the scientific study of the function and evolution of animal behaviour patterns) in this curriculum animal welfare is discussed, because ethology together with animal health, are the main instruments in the evaluation of animal welfare. Certain behaviours can be used in the evaluation of animal welfare.

The main research conducted in farm animal ethology is at the National Institute of Animal Science situated about 80 km north of Aarhus. Some research is being conducted on cow and calf behaviour, including play behaviour, behaviour when separated from their dam, whether calves have to be kept in groups to fulfil behavioural needs etc. Some work also being undertaken on human animal interaction, inspired by Paul Hemsworth's work in the field. Much work has been done in Denmark in the last 20 years on space requirements. Use of robotic milking will result in more behavioural studies.

### **Slaughter methods**

Pithing is routine procedure in the European Union and is achieved by introducing a stylet through the hole made by the captive bolt into the spinal cord to secure a proper death after stunning and to immobilise the stunned animal to reduce the risk of injury to people..

### **On farm slaughter of calves**

Preferably by captive bolt and bleeding, however farmers do not like cutting throats. There is variable success with on farm slaughter of calves.

## **United Kingdom**

**Ministry of Agriculture Fisheries and Food (MAFF), David Prichard – the head of the Animal Welfare Veterinary Team within the State Veterinary Service.**

### **Structure in 2000**

Chief Veterinarian

- Animal Welfare Veterinary Team
- Veterinary International Trade Team
- TSE and Exotics Team
- Endemic disease and surveillance and zoonoses team
- Another endemic diseases team
- Rabies team

UK split into five regions, each headed by a “Head of Veterinary Services”

- East England
- West England
- North England
- Wales
- Scotland

Each Region is divided into divisions and a division will typically have a Divisional Veterinary Manager, between 12-15 vets, a similar number of Animal Health Officers and perhaps between 30-50 support staff.

Teams at headquarters are generally responsible for policy development, however they may also be responsible for some service delivery. Administrative teams are called Divisions

David Prichard is responsible for policy development and implementation.

The Animal Welfare Division, run by Christopher Ryder, has four branches

1. Welfare on farm
2. Welfare at slaughter
3. Welfare during transport
4. Provision of support for the Farm Animal Welfare Council (FAWC)

FAWC are independent advisers, the secretariat are independent as well, so happens that for administrative purposes they are located in the same office. From a policy perspective, they provide independent advice. David Prichard is a “Veterinary Assessor” to FAWC, he, or another member of his team sit in on their committees or working groups providing technical advice.

FAWC essentially take evidence from industry, welfare scientists, animal ethicists, consumer organisations and the general public. They synthesise that and produce advice in the form of reports.

### **Current issues**

David Prichard had just returned from a Council of Europe meeting in Brussels -a large amount of his work is international. Council of Europe have just completed the new council recommendation on turkeys and started on pigs, they also spent a couple of days looking at the role of antibiotics and growth promotants in relation to animal welfare.

The Council of Europe is a treaty organisation that began in 1949, with backing from Winston Churchill, to examine human rights issues following the Second World War. It began as a human rights organisation. There are 40 member countries including the 15 European States of the European Union and all the accession countries (the 10-11 countries wanting to be members of the EU. Australia has observer status.

The Council of Europe influences welfare policy through conventions. The Council of Europe has conventions, governments can sign up to these conventions. The United Kingdom is signed up to

- the Farm Animal Convention
- the Animal Transport Convention (deals with international transport)
- the Pet Animal Convention
- the Experimental Animals Convention
- the Zoo Animals Convention

Countries turn up to the convention, the convention is drafted and is regarded as the ideal way to keep animals. The conventions are published on the internet.

Pet animals and experimental animals are managed under separate law dealt with by the Home Office in the UK. Zoo animals are the responsibility of the Department of the Environment, who also deal with boarding kennels and riding schools.

David Prichards team are farm animal oriented, however because they have a Minister who is interested in animal welfare, Ministry of Agriculture, Fisheries and Food (MAFF) are seen as the lead department in animal welfare.

The convention starts by describing the biological characteristics of the animal, it then describes its ideal needs in relation to housing, feed and care – the conventions set the standard.

The group who meets to discuss and agree consists of representatives of the “contracted parties” as well as welfare groups including the

- World Society of the Protection of Animals (WSPA)
- International Society for Animal Ethology
- Council of Agriculture – Europe

The Farm Animal Convention was originally drawn up by WSPA.

The conventions are the only internationally agreed animal welfare standards.

The transport convention is currently being revised.

### **Animal welfare research**

MAFF spends about four million pounds annually on animal welfare research. MAFF has a system of competitive tendering. Recently a tender was issued for alternative systems of keeping hens in barns, focusing on stocking densities to inform the revision of the Poultry Directive and the laying hen directive.

David Prichard’s team spend a fair amount of time setting up the tenders and visiting research workers at least on an annual basis, sometimes monthly.

### **Issues**

Transportation for live animal export is a major issue in the UK. The public do not like to see young lambs and calves going out of the country – live calf export has been a major political issue as the result of large scale demonstrations against calves leaving for veal production in Europe when veal crates are banned in the UK.

### **Bovine spongiform encephalopathy (BSE) and the fate of surplus dairy calves**

Following the discovery of BSE in the UK, one of the first measures to protect human health was to ban offal from calves more than six months of age from entering the human food chain. This occurred in 1989-1990. This measure went hand in hand with the Specified Risk Material (SRM) which were measures to stop offal getting into the animal food chain.

On 26 March 1996 an announcement was made that linked BSE to variant Creutzfeldt-Jacob disease (vCJD), on this date the live export of calves into Europe stopped. Prior to 26 March 1996, calves from the UK less than 6 months of age were exported to Europe.

The rest of Europe did not want to take cattle from Britain older than 6 months of age as they were not prepared to impose offal bans on European abattoirs to accommodate the slaughter of cattle of British origin.

### **Age at transportation**

The rules in the UK require “no calves to market less than seven days old and calves cannot be presented to market more than twice in 28 days”. Hence calves can not be hawked around markets.

Following the variant Creutzfeldt-Jacob disease (vCJD) announcement in March 1996, the United Kingdom had a major problem. Prior to the vCJD announcement, approximately 600,000 calves went abroad into the veal crates in Holland, Belgium, France and Germany.

Requirements on transportation were influenced by vagaries of community law. Dutch calves were less than 14 days of age, French calves less than 42 days of age or three weeks. The UK required calves to be more than seven days of age before transport “which is actually when the umbilical cord is dry – there is no other way to clarify the age of the calf other than the condition of the umbilicus” per comm David Pritchard.

There was a very small window of opportunity for calves to be exported, a highly organised, efficient and humane system of moving calves was developed. Certain pressure groups saw this as an issue that was winnable and the campaign “captured the imagination of the handbag swinging, middle aged, middle class lady in the SE of England”.

The impact of the welfare campaign was minimal in terms of the number of calves exported, but had a major impact on the resources of the State Veterinary Service policing the trade. Eventually the ban on exports of live calves was purely a response to vCJD and had nothing to do with calf welfare. Calves from Ireland are not allowed to trans- ship Great Britain.

### **Cattle identification**

Each calf has double identification, a passport and a computer record which records every movement made. Cattle identification systems are compulsory in the EU. In the UK cattle identification includes permanent identification with a computer database of all movements, records of sire and dam, date of birth, records of disposal and auditing on farm. It is 20 times bigger than the motor vehicle registration in Great Britain and is managed by the British Cattle Movement Office in Cumbria comprising a staff of 350.

Following March 1996 the dairy industry had reduced outlets for its surplus calves. The response was to introduce the Calf Processing Aid Scheme (CPAS) as a subsidised outlet, effectively an artificial market to help producers who faced a severe drop in revenue from calf sales following the BSE crisis. CPAS provided a premium payment for calves slaughtered before 20 days of age, but meat produced was not allowed into the food chain. At first only dairy breeds were eligible, but the scheme was extended to beef breed calves from December 1996.

Other member states of the European Union were given the option to introduce the CPAS, or an Early Marketing Scheme(EMS) for veal calves. France, Portugal and the Irish Republic opted to introduce CPAS. The UK accounted for 73% of the total slaughterings under the scheme. CPAS ended on 31 July 1999. Two million calves were removed from production in the UK, 90 % were dairy breed calves, predominantly black and white bull calves.

Following the end of CPAS in July 1999 there were problems. Calves had no or very little value, the dairy industry was depressed and continues to be depressed. There was a spate of political activity by farmers, including dumping calves in Westminster, in telephone boxes, giving calves to the RSPCA. While CPAS was operating, dairy farmers joined all cows to Holstein bulls and did not use beef breeds to produce calves more suitable for beef production.

CPAS calves were collected at markets and taken to abattoirs, basically the skins were used and the rest disposed of. Farmers joined all cows to Holstein bulls and had a guaranteed cheque and the maximum number of Holstein heifers they could produce. It took some time to adjust to the withdrawal of CPAS, dairy farmers had to commence using some beef breed bulls over dairy cows to produce a calf that was more valuable.

The situation with surplus dairy calves varies in different parts of the country, there are no problems in areas where there is a demand for calves for beef production. There has always been a problem with the disposal of Channel Island breed bull calves.

It is not common practice for a farmer to shoot unwanted calves. Regulations in the UK in relation to slaughter on farm are complex and subject to misinterpretation, because until Jan 2000, a captive bolt pistol was regarded as a firearm and a firearms licence was required – most farmers would have a firearms licence for a shot gun or perhaps a rifle, but would not have a licence for a captive bolt. The Home Office then deregulated the captive bolt, no licence is required to own a captive bolt, however to use a captive bolt, a slaughtermans licence is required under the Welfare of Animals Slaughtering and Killing Regulations, except for killing an animal in an emergency or killing for home consumption. To get a slaughtermans licence competency needs to be demonstrated, to a veterinary officer, for particular livestock species. A slaughtermans licence is not required to kill an animal with a free bullet. A working group of the farm Animal Welfare Council is looking at the destruction and disposal of low value livestock, it is an issue.

### **Use of pithing rods**

UK regulation requires pithing, a captive bolt does not kill (probably with the exception of a calf or young lamb). The captive bolt is not officially or legally regarded as a method of killing, therefore the operator has to know how to kill an animal either by pithing or exsanguination and also has to know the signs of death.

### **MAFF Animal Welfare Division – On Farm, Michael Cross**

Michael Cross' responsibility extends to managing policy development and implementation of farm animal welfare, with a team of 13 staff. Colleagues manage markets, transport and slaughter.

Negotiates with Brussels

Tries to achieve EU standards rather than legislate unilaterally

Produces codes of practice and advisory material

Copes with a mass of correspondence, either from members of parliament or the public who are concerned about welfare standards and want to know what is being done

Has a major job in presenting government policy in a positive way, a lot is being achieved, however it is difficult to get the good news in the public arena..

Much of the correspondence dealt with is driven by media reports which in turn are stimulated by lobbying activity – but equally a lot of material comes directly from lobbying activity from the welfare non- government organisations (NGO's) who are hugely effective communicators with their constituency (better than MAFF at getting the message across).

A manual has been prepared for cruelty investigations

Enforcement is important, it is well to have regulation, however even if regulation is enforced to the level to which there is penalty through the judicial system, the penalty can be variable. Competitors in Europe do not adhere to the regulation or have competent authorities to enforce the legislation to the same degree. Enforcement is a key issue

There is a new system in MAFF to measure complaints vs enforcement.

### **Ministry of Agriculture Fisheries and Food, Beef and Sheep Division, Dr Richard Cowan**

Richard is a senior administrative civil servant trained as an economist. He runs the Beef and Sheep Division of the Ministry of Agriculture, Fisheries and Food, which is responsible for providing advice to Ministers on the management of the markets for beef and lamb and for support systems available to those who depend on those markets.

The UK has relatively little experience of adding value to calves. UK has a very small veal industry, perhaps seven or eight dedicated producers.

Prior to the imposition of the EU ban on UK exports of cattle and beef products in March 1996, most bull calves from the dairy herd were exported to France and the Netherlands for rearing as veal. Exports ran at about 500,000 head per year and the UK trade in veal and bobby veal accounted for about 25,000 head.

Following the imposition of the export ban, there was no market for dairy-bred bull calves and we introduced a slaughter scheme under EU rules, which paid a considerable premium for calves slaughtered at less than 20 days old and subsequently destroyed (it was a condition of the scheme that the resultant product did not enter the human food chain, though it could be used as pet food).

UK slaughtered about 2 million calves under this scheme between April 1996 and July 1999, when the scheme was terminated.

As a result of the ending of the slaughter scheme, the market for dairy calves virtually collapsed. Some beef producers were prepared to take on dairy-bred bull calves for rearing as beef, perhaps with a final market in the manufacturing sector (e.g. for hamburgers etc). Two operators in the UK are now looking seriously at developing a veal industry on the Dutch model, with a view in the first instance to processing some 500 head a week. The economics of this depend critically on the UK price for dairy-bred calves being well below that in France or the Netherlands. That situation is likely to prevail for so long as UK exports of live calves are banned, but once the ban is lifted, prices will rise again and the UK industry is likely to be on too small a scale to compete effectively with the Dutch. The UK operation is thus a short to medium-term stop-gap.

In the meantime, our understanding is that the majority of UK dairy-bred calves are being slaughtered on farm as soon after birth as possible, and disposed of into the pet-food market.

### **Compassion in World Farming (CIWF), Petersfield, Joyce de Silva**

CIWF was set up in 1967 by Peter and Anna Roberts, they had been dairy farmers and as time went on they had become more concerned about animal welfare. It got to the stage where Peter was taking his cull cows to the slaughter house himself to see that slaughter was done correctly, they gave up farming and changed business, but at the same time they became more and more interested in the development of factory farming.

Peter had asked the RSPCA and one of the other big international organisations to campaign on the battery cage issue – they were not interested, dogs, cats and whales took precedence. He was discussing this with a solicitor who suggested to Peter that he would have to take up the issue himself. CIWF started in Peter and Anna Roberts house, then moved into a small office in the nearest town of Petersfield –and then moved to the current premises in about 1995.

The core function of CIWF has always been to achieve import bans on cruel rearing systems and practices and long distance transportation. CIWF have always campaigned peacefully and worked to get legislative change.

Membership has grown, CIWF now has 30,000 people on the mailing list, mostly in the UK. In 1992 a branch was set up in Cork in the Republic of Ireland.

In 1994 a sister organisation was set up in France. There are small CIWF branches in the Netherlands, Italy, Spain and Greece.

CIWF has started working with some of the Eastern European accession countries to raise awareness of animal welfare before they joined the EU, otherwise with changes to the voting structure, CIWF may find it difficult to get further welfare reform.

CIWF has a major issue with the World Trade Organisation, which is set not only to destroy the development of improved welfare standards, but also to destroy the existing standards. For example, after a huge Europe wide campaign in 1999 a decision was made to phase out battery cages for hens by 2012. WTO does not recognise differences in production practices and therefore eggs from competitors that do not have to adhere with EU directives on egg production will be cheaper.

### **History of Calves in CIWF**

IN 1984, Peter Roberts the founder of CIWF, undertook a court action against a veal create farm in Sussex. The farm was owned by Catholic monks who had built a chapel on the proceeds from the farm. The monks said that the calves did not suffer. Peter Roberts was testing the law, he lost his case. He appealed and lost again. The publicity created by this case was huge. The following year, the government announced that veal crates would be phased out.

Veal crates have never been widely used in the UK, so the ban on veal crates had little effect. The bulk of the male dairy calves were exported to Europe (approximately 500,000 per year). In 1994 the three major ferry companies taking passengers to the continent decided that they no longer wanted to have anything to do with the transport of calves to Europe because there was a campaigning against the trade and their clients did not like seeing calves in lorries being transported to Europe. Exporters started to export calves by other means, including air, hiring of ships etc.

Dover Harbour carried the bulk of the trade, Dover harbour Board supported the decision of the ferry companies to stop exporting calves from Dover. The Dover Harbour Board were taken to the high court by the exporters and lost on the basis that a port provided a public service and had to accept legitimate trade. As calf and lamb export was legitimate trade, Dover Port had to handle it. Exporters then resumed exports from Dover with their own vessels, rather than using other carriers.

In 1996 the government announced the link between vCJD and BSE and the calf trade had to stop. The EU had the Calf Processing Aid Scheme (CPAS), calves were killed, initially by the age of 10 days, then by three weeks of age. The initial price paid for calves was just over 100 pounds per calf, the amount decreasing over the life of the scheme. CPAS continued until July 1999.

CIWF were not happy with the CPAS. Dealers would pick up calves from farms, bring them to collection points, some were held overnight before transport to abattoirs. Calves were being transported from Devon to York because the Yorkshire Slaughter House was offering a slightly higher price on top of the incentive (the hide of the calf was used). Vets at abattoirs reported that calves were starving on arrival at the works. Some farmers had not fed calves prior to collection. CIWF repeatedly advised the minister that CPAS was a recipe for poor animal welfare. CPAS was also implemented in Ireland and France, CIWF reported that the scheme was an animal welfare fiasco in these countries.

When CPAS stopped, farmers were up in arms and unhappy about killing their own calves, despite the fact that they were previously happy to send them into the CPAS system and previously to veal crates in Europe.

CIWF are currently commissioning a study into the economics of the live export trade. In 1999 there were over 1 million lambs exported from UK.

CIWF funding comes from supporters, donations, legacies. CIWF campaign, very specifically, to change the law. CIWF are not allowed to be a registered charity. The CIWF Trust is a registered charity as it is the educational arm of CIWF. The CIWF Trust can get a grant from other trust making bodies.

CIWF want good animal welfare laws that are clear and enforced, (UK has a law which prevents the routine tail docking of piglets, however 80% of piglets are tail docked). CIWF think that the Codes of Practice are well meant, however they are window dressing and not very useful.

## **Current main campaign issues**

### Animal Transportation in Europe

Animal trade is significant in Europe. Sheep are being transported from Spain to Greece, from Scotland to Greece. Pigs are being transported from the Netherlands to Spain and back to the Netherlands for slaughter.

### Sow stalls and tethers

A ban on both exists in the UK. Tethers have been phased out in Europe, but not sow stalls. CIWF are stepping up the sow stall campaign in Europe and believe this is winnable as Holland and Denmark are taking unilateral action to commence the phase out of sow stalls.

Consumers are the same all over with world, when confronted with a moral issue, consumers give a moral answer, but this may not alter their buying behaviour in the supermarket. CIWF have found a huge swing away from battery eggs and like to think that this is because they have been successful in getting supermarkets to label the battery eggs “eggs from caged layers”. The EU said labelling was not mandatory. A couple of supermarkets labelled their battery eggs in small print on the back of the carton. TESCO’s, the largest supermarket chain refused to label their eggs – advice from their consumers was that they did not want to feel guilty when buying eggs. CIWF took TESCO’s on by organising a tour of 18 of TESCO’s largest supermarkets in areas where there was a local TV station, a big ex-battery hen model was made, the campaign was due to start in Plymouth, however on the morning of the launch of the tour, TESCO’s considered their position and decided to label their battery eggs and the campaign was called off. TESCO’s have taken CIWF seriously since.

Joyce di Silva grew up on a farm and had a realistic view of animal production, she had read Ghandis’ autobiography and started thinking about the “meat on my plate” and decided she could not eat it any more.

CIWF have 23 staff including investigators.

### **Royal Society for the Prevention of Cruelty to Animals (RSPCA) Horsham, Martin Potter, John Avizienius Senior Scientific Officer – Farm Animals Mike Sharp Freedom Foods**

Farmers believe that the RSPCA is in part responsible for their current problems of disposal of bobby calves because the RSPCA is opposed to live animal export, however vCJD stopped the trade in live calves.

### Live animal export

RSPCA Special Operations Unit have been tracking live animal exports for months. Videos such as “Some Lie Dying” show the extreme of the problems that can occur. EU authorities are slow to react and the inspectorate wonder what more they have to do. There are very few veterinary inspectors in the EU and they do not often get to the places that the RSPCA would like them to go. For example, there is an annual festival in France which has generated lots of video footage of suffering animals. This footage has been sent to the European Commission. The Commissioner has said that he is going to take action against the French authorities, nothing has happened as yet. If the festival is restricted too much, it may go underground. Sheep (mostly cull ewes), for this festival have been travelling from UK to France since January, they are being “stock piled” in appalling conditions. The condition of the animals at slaughter seems to be of little concern, the forequarters only are used. Lots of Koranic laws relating to hygiene are being broken.

### **RSPCA scope John Avizienius’ role**

The structure of the RSPCA is complex. John’s official role is Senior Scientific Officer, Farm Animals Department. His staff are generalists, they may have to deal with any inquiry that comes in, over and above that, staff have lead responsibilities, Johns’ is beef and dairy (others include organic farming, slaughtering, pigs, poultry, sheep, goats, transport). Inspectors are also members of numerous

committees , John is on MAFF's tuberculosis forum. John is also a Field Operations Manager, responsible for a small team of inspectors who undertake random spot checks on Freedom Food Farms.

Freedom Foods started in 1994 and has two levels of inspection. The first level inspection comprising an initial inspection and annual visit is conducted by Freedom Foods staff (a separate entity to RSPCA in the form of a wholly owned subsidiary). The second level (unannounced or short notice) inspections (most notice generally given by 9pm the previous evening) are conducted by the RSPCA inspectors. Farms, transporters and abattoirs are inspected, giving the scheme a lot of credibility.

John supervises the five inspectors (one in Scotland, four in England and Wales) who do the short notice inspections. The aim is to do a short notice inspection on 30% of participating farms/ slaughterhouses etc every year. They are currently concentrating on those areas which are critical control points in the life of the animal, such as unloading, loading procedures, catching spent hens, slaughter and transport and trying to get welfare assessment procedures in place.

Currently a three year study is under way with John Webster and his team at Bristol looking at the efficiency of procedures involved in Freedom Foods in relation to animal welfare . Freedom Foods tends to concentrate on the provision of facilities, John Webster and his Bristol team are starting to measure human animal interaction.

No two farms are the same, it is possible to find a farm which just satisfies the provision of a good environment, it may look scruffy, but the attitude of the farmer to his/her stock is very good and hence the welfare is good and vice versa.

What effect has the RSPCA standard used by Freedom Foods had on animal welfare?

This will be difficult to quantify as Freedom Foods has caused others to improve their standards. The scheme has been running for five years, in that time Freedom Foods standards have been supplied to every major supermarket, government department and anyone who has developed an assurance scheme and most have based their core standards on what we require.

Opinion polls advised that consumers cared about animal welfare, the RSPCA badgered the supermarkets to get a scheme up and running that would give consumers the choice of animal friendly products. The supermarkets asked the RSPCA to do it and bring it back to them. This was a major change for the RSPCA, from being a critic of some intensive systems which had the potential to compromise animal welfare to drawing up a set of standards which would be considered acceptable. There was some internal resistance to the RSPCA being involved with farm animal systems.

In 1998 Freedom Foods became a subsidiary of the RSPCA , it has its own Board of Directors and they determine the running of it.

### **Other Brands**

Currently in the UK there are so many assurance schemes and assurance marks that the consumer can be confused. Freedom Foods is the only assurance scheme focused on welfare. Since BSE, E Coli scares etc etc, the consumer wants safe food, tracability, and good animal welfare. However price is still a key factor in food choice.

Consumers advise that they are interested in animal welfare but do not want to think about it when they consume an animal product, instead they rely in those like the RSPCA to ensure that the product is sound in terms of welfare associated with method of production. Freedom Foods has had to write some supplementary standards in addition to the welfare standards to ensure food safety and traceability.

The consumer does not necessarily know what Freedom Foods means , however they do recognise the RSPCA mark and that is all they need to look at because they trust the RSPCA , a significant responsibility for the RSPCA.

There are 4,000 Freedom Foods accredited farms, and likely to be thousands of others influenced by RSPCA standards developed for Freedom Foods.

RSPCA contract out research to Universities and Institutes

RSPCA membership is relatively small, RSPCA has a tremendous base of people who are prepared to make a donation, but not necessarily become members. There are many departments in the RSPCA including Wildlife, Veterinary Services, Research Animals, Press, Publications, Special Operations Unit, Campaigns. There are 1500 employees at headquarters and around the country and about 200 branches. Branches raise money for themselves, they are autonomous charities and therefore do not get any direct funding from headquarters at Horsham, maybe with the exception of grants for capital works.

## History

The RSPCA started in 1824, headquarters were in London. There had been some attempt by some forward thinking members of parliament who were also connected with the anti slavery movement to introduce legislation in parliament to try to protect coach horses and prevent ill treatment of animals at markets. Many early attempts at legislation were ridiculed and not passed. Then certain people including William Wilberforce, Richard Martin (an MP with a big estate in Ireland) and the Rev Arthur Broome (a London vicar) turned their attention to animals after completing anti slavery work.

Richard Martin was called Humanity Dick, he started to bring private prosecutions to people who were ill treating horses and donkeys. When they were fined, he paid their fines, he believed that education was the key and if animals were treated better, they last longer.

The RSPCA started in the Old Slaughters Cafe in London. The overall mission statement was to “promote kindness and prevent cruelty” based on education. The inspectorate started from that, the first inspectors had to be teetotal. There was huge demand for their work in London and other parts of the country. People like Charles Dickens made donations. Arthur Broome spent some time in goal as he was responsible for the RSPCA’s debts. There are now 330 inspectors in England and Wales (Scotland has its own sister society to the RSPCA).

The RSPCA has a very close association with the National Society for the Prevention of Cruelty to Children (NSPCC). RSPCA was one of the prime movers in setting up the NSPCC, initially the NSPCC used the RSPCA’s building. The RSPCA has worked with the NSPCC looking for correlations between child cruelty and animal cruelty.

## **RSPCA and the World Trade Organisation (WTO)**

The whole World Trade Organisation discussion in terms of trade liberalisation does not seem to have animal welfare on the agenda. RSCPA has written two reports to the WTO on the effects of trade on animal welfare and submitted them to the European Commission and other relevant agencies.

It is only since 1997, that within Europe itself in the treaty of Amsterdam, that farm animals have been recognised as sentient beings. We are asking the WTO to immediately put animal welfare on their agenda when the EU has only had animal welfare officially as a legislative model within Europe since 1997.

All the animal welfare interests in the EU amalgamate as the Eurogroup.

It is clear that some EU countries, like the UK, with high welfare standards will be penalised. This is why clear, concise labelling is so important. If there is a product produced in another country, in a manner unacceptable to the UK, and sold in the UK, the method of production should appear on the label of the product. For example, currently pig farmers in the UK are struggling financially. The UK pig industry practices high welfare standards. RSCPA approached government for an assurance that all land based armed forces would only consume British products and found that this was not possible as it is anti competitive and in breach of a new EU law.

The adage that animal welfare is expensive is not always true, cost can be low compared to other costs. For example the Meat and Livestock Commission provided some costs for the pig industry. The strong

pound was costing producers and extra 24-26p / kilograms pork, the ban on meat and bone meal was costing an extra 1-2 p per kg pork, animal welfare cost less than 1-2 p per pound.

### **Production myth**

The RSPCA refutes the myth that animals would not produce meat, eggs, milk etc if they were not happy. The genetic gain in animals in the UK has been dramatic and animals will produce whether they are managed well or not. Dairy cows produce milk to the detriment of their own bodies, leading to low conception rates and increased metabolic disease. Good production does not always ensure good welfare, however good welfare does ensure good production.

There are numerous definitions of animal welfare. John's own personal definition/ philosophy is unquantifiable "they are healthy, they are happy and it can be sustained" – it is not academic, but based on experience, stockmanship and being able to assess the state of an animal. During John's work as a Freedom Foods Inspector he likes to look at the animals' reaction to the farmer – if they scatter it is not a good indicator of good interaction between stockperson and stock.

### **Calves in particular**

RSPCA have been very closely involved with the calf problem as the result of the end of the Calf Processing Aid Scheme (CPAS). Holstein calves are worthless, as a consequence some farmers have been dumping calves at RSPCA centres. UK had to deal with 500,000 surplus calves, government has given guidelines for farmers to destroy them on the property of birth. Farmers have been ringing the RSPCA en masse advising that they do not want to kill their own calves. Calf dumping is not uncommon, and the inspectorate have been on the alert for this. Calves have been dumped as a stunt to create publicity.

The RSPCA made submissions to government before CPAS was rescinded. It was too simplistic to say that farmers should change their breeding policy to produce beef cross calves that would have some value, dairy farmers need herd replacement heifers.

Farmers have been looking for markets for surplus calves, for example a welfare friendly veal production system where calves are milk fed and group reared on straw, with plenty of space and access to water has just started in Wales. The RSPCA believes this is a positive step and will be monitoring it. The RSPCA has supported group housed, barley straw bedding veal systems in the past with calves going out of the system for slaughter locally (at an abattoir with an EU licence) at about 200 kg liveweight, the product is generally exported to France.

Some geographically disadvantaged areas have few options for surplus calves as they would have minimal access to contract rearing schemes.

John has visited Holland at the invitation of a British Company to look at a Dutch welfare friendly veal production system. Calves group housed on slats, no forage, no bedding, no water, fed by computer operated systems. Because they were no longer in crates it was perceived to be welfare friendly. This system would not be acceptable in the UK, however the Dutch sister society to the RSPCA agreed that it was the best available to them and an improvement of the crate system.

### **Live exports**

There is evidence to show that livestock do not necessarily end up where you think they were going, calves may end up in crates.

Generally there is a low mortality during the journey followed by a high mortality post journey. Work at Bristol suggest that calves less than four weeks old should not be transported because the immune system is challenged. This is also the opinion of the British Veterinary Association and the British Government, however government has to abide with EU regulations.

If live calf export from the UK recommenced, it is likely that the public outcry would again get to fever pitch.

CPAS was an interesting scenario, compounded by a number of factors including, depressed farm incomes, calves picked up early in the morning and travelled up and down many farm tracks and very young calves at abattoirs with wet umbilical cords (which is illegal). Hence the welfare was poor in some cases,

The problem is that the genetics of the Holstein is tuned to milk production, the calf is a by-product and if it is worth anything, then that is a bonus. Holstein animals do not produce prime carcass. UK is only 78% self sufficient in prime and manufactured beef, yet Britain cannot possibly satisfy the UK market with surplus Holstein calves, because of their conformation. British Friesian calves are a dual purpose breed and do produce a prime carcass.

It is not possible to know the age of a calf without a reliable birth date. It is impossible to tell if a calf is five or seven days old. The age of the calf is assessed by the condition of its umbilicus. All calves have to be tagged and have a passport before they can be sold.

### **RSPCA Inspectorate in the UK**

UK is split into 10 regions, each inspector will have a local branch with which he/she is associated, the inspectorate is paid centrally. If there is a problem with farm animal welfare, the first port of call will often be the state veterinary service.

The RSPCA in the UK has no statutory power (the Dutch sister organisation to the RSPCA has the same animal welfare powers as the police). The ability to enter premises is down to the skill of the inspector. Across the country the RSPCA receives one call every 20 seconds – all complaints are followed up – this is written into the constitution of the RSPCA.

### **Freedom Foods, Horsham, Mike Sharp General Manager**

The RSPCA is a friend of the consumer, but not necessarily a friend of the farmer. Freedom Foods is a mechanism to carry the RSPCA message to the producers re what they cannot do and what they should do which would enable them to add value to what they are producing for their market place.

Freedom Foods was set up as a third party to carry the RSPCA's message to farmers, to act as a buffer between RSPCA and farmers.

Everyone tends to compete at the lowest common, which is the lowest price. A few producers consider that if they continue down this route, they will be considered as just another supplier of meat. Some producers wanting to secure a market position are seeking to add value and offer other benefits to the consumer, including good animal welfare.

When Freedom Foods was set up six years ago, research was undertaken to determine what issues the consumer considered when buying food and the relative importance of these issues. Twenty five per cent of people said they considered animal welfare as an issue and animal welfare was fifth on the list of issues. Six years on, in response to the same questions, fifty per cent of people are now considering animal welfare as an issue.

Freedom Foods is an independent organisation with no vested interest, Freedom Foods has to ensure that the value (welfare) is secured in truth. Assurance schemes are developing a broadening their scope into issues including environment, welfare, food safety and biosecurity. If Freedom Foods was going to succeed and prosper it had to cover all issues, not just welfare, but deliver a gold plated assurance program in terms of welfare.

Freedom Foods provides the opportunity for a farmer to be inspected by a credible, independent third party, to deliver all his/her industry assurance needs for delivering into the market place, it also gives him/her that extra value and the opportunity to market that value.

Freedom Foods put a trade mark on products that come from animals that have been reared to a standard.

Freedom Foods staff have good credentials and have to go through rigorous training, not only are they skilled auditors, they ensure awareness and delivery of standards of production. A combination of auditing skills and knowledge of standards of production ensures delivery of the standards. Comparison of written standards is meaningless, the consistent delivery of the standards is the important issue.

Freedom Foods premises are also audited by the Farm Animals Monitor Team, employed by the RSPCA, to absolutely secure delivery of standards of production.

### **Chances of expansion of Freedom Foods ?**

From a practical point of view, Freedom Foods has a lot to do in the UK and is unlikely dilute efforts in the UK by expanding into other countries. Freedom Foods has contacts in Australia, NZ and Holland, USA, Canada etc, we have so many visits, requests to host, requests to go and see and requests to accredit products that come into the UK.

Freedom Foods deal with requests to accredit products coming into the UK. The British pig industry has had major advertising campaign to heighten awareness of welfare issues in the UK. Denmark and Holland are the two biggest suppliers of pig meat to UK. Danish bacon wants to secure its position in the UK market place, they keep very close tabs on our standards, practices and procedures to ensure that they continue to secure a position in the UK market.

Freedom Foods deals with those who are looking to create a new market in the UK and need to know what values are the most important in the UK market place.

Freedom Foods is a catalyst for change elsewhere and provides a useful framework for those building a similar structures elsewhere.

### **Cost**

There are three elements

- the cost of making the change to meet the standards which can vary from nothing to lots and depends on motive and opportunity and is down to the farmer
- cost of inspection, initial inspection to ensure the standards are in place and an annual inspection to ensure standards are maintained
- cost of selling products under the Freedom Foods label, in principle, that is split in two
  - a cost to the producer (a levy)
  - a cost to the retailer (a royalty)

One of the problems of recent times has been the plethora of assurance schemes and therefore a single producer being inspected numerous times to meet the various requirements of different schemes, the result is high cost. Freedom Foods have been trying to consolidate their standards, broaden the scope to match up with and encompass the industry standard in addition to Freedom Foods welfare standard, with the result that the Freedom Foods inspection is the only necessary inspection.

Freedom Foods is self funding and non- profit. Services are charged based on the recovery of cost to Freedom Foods. However invoicing every single point of contact is not cost effective, instead Freedom Foods arrive at average prices as there should be no advantage or disadvantage, depending on farm location.

Freedom Foods will never be profit making and as of 1998 is a charitable company. The Chairman of the Board of Directors of Freedom Foods is the Director General of the RSPCA. There is no farmer representation on the board, the other members of the board tend to be people from welfare organisations such as the Humane Slaughter Association, World Society for Protection of Animals, Scottish Society for the Prevention of Cruelty to Animals and bankers.

Producer involvement occurs in technical working groups, where standards are continually reviewed.

## **Meat and Livestock Commission, Milton Keynes, Duncan Sinclair**

### **Bobby calf industry in the UK**

In the late 1970's and early 1980's there were between 200,000 – 300,000 calves slaughtered each year into the bobby veal industry. Following the introduction of milk quotas in 1983/84 cow numbers reduced by 100,000 – 150,000 head in a very short space of time, at the same time, farmers started to add value to their calves by using a higher proportion of beef bulls in their dairy herd and producing less pure bred dairy animals reducing the number of pure bred dairy bulls.

At that time the dairy blood line was predominantly British Friesian, which is a dual purpose animal. In current carcass conformation terms, most of the British Friesians would have hung up at a 0+ (see handout on Eurogrid carcass classification). The difference between 0+ and 0 – is about 20 pence per kilogram, between 0+ and 0 - prices start to become heavily discounted as saleable meat yields decrease.

There used to be a significant live calf export trade calf through the early 1990's which began to accelerate in the mid 1990's. By 1995, the last full year before the BSE crises erupted, UK exported 500,000 calves, the majority of these were pure Holstein bulls. Dairy bull calf price for export was in the region of £130- 140 per head. (from the mid 1980's the Holstein became the most favoured dairy sire offering greater potential milk yields at a time when there was pressure to increase efficiency and reduce cow numbers). These pure Holsteins are much less conducive to beef production compared to the traditional British Friesian.

On 20 March 1996, as the result of BSE, a ban was imposed on export of beef and live calves from the UK. The market developed for dairy bull calves disappeared overnight leaving a need to deal with 500,000 calves in the UK. Within EU legislation there was a scheme tabled in 1992 under the McSharry reforms (the previous round of Common Agricultural Policy(CAP) before the current "Agenda 2000" reforms). CAP is essentially all the EU legislation laid down for all the livestock sectors (we have a legislation service run by MLC's Economics department providing consolidated, up to date, EU wide legislation to which the European Commission itself subscribes).

The scheme tabled in 1992 which had laid dormant became know as the Calf Processing Aids Scheme (CPAS), it was activated about May 1996. It essentially paid the abattoirs a flat rate of £105 for dairy bull calves, providing an alternative outlet for bull calves that could no longer be exported. These calves were to be taken out of production before they reached 20 days of age and product from them was not to enter the food chain.. If the abattoirs were getting £105, the farmers were getting £95 of that. Although calves had dropped by £40-50 the farmer was still maintaining his income to a certain extent. Through the course of 1996 and 1997 and particularly in 1998 the number of calves going into CPAS grew to a much more significant number than live exports used to account for.

In 1995 approx 500,000 calves were being exported. In 1998, 700,000 calves were going into CPAS taking 200,000 more calves per year out of production to the point where it began to affect our prime cattle slaughter availability, which in 1995 had been about 2.4-2.5 million and by 1998/99 had reduced to 2.2 million. There was no incentive to use beef breeds to add value to surplus dairy calves because farmers could get a reasonable return for their surplus calves while reaping the benefits of improved genetics in the dairy sector. CPAS was due to end in 1998, but following an extension, it finally ended on 31 July 1999.

Immediately following the end of CPAS the market entered into chaos. In the six months leading to the end of the scheme, compensation for calves had fallen to about £45 per head, when the scheme ended the price dropped to between £8-10, however many of the poorer quality calves were worthless. Pens were provided in markets where calves which did not attract a bid were set aside, these calves were passed onto the local knacker or abattoir. The Farming Unions encouraged the climate that the government would reintroduce the scheme. Two months after the scheme ended it became increasingly obvious that there was no way back, a different attitude then emerged within industry, the peak autumn calving period was imminent, paying the knacker £3-5 to dispose of surplus calves became the most viable option.

Dairy calves can be disposed of by a knackery for example within 36 hours of birth without the need to tag the calf or apply for a passport. There was anecdotal evidence that hunt kennels and knacker yards were very busy with surplus calves. Farmers preferred to pay the knacker to dispose of the calf, rather than destroy the calves themselves and dispose of them on farm.

The bobby calf industry is on the rise, officially 75,000 calves were slaughtered in 1999. Since January 2000 there has been a drift back to using beef bulls either through natural service or artificial insemination in the dairy herd once again to increase the value of the calves. A higher proportion of the year 2000 calf drop in the UK will be beef crosses and will therefore be suitable for rearing. The industry was uneasy at the potential of rearing Holsteins for beef. From October 1999, 2,000 extra calves per week were retained in production. Duncan Sinclair's guess was that nearly half of these were beef crosses and that the number of Holsteins retained in production will be modest.

The milk price in the UK has fallen from 21 pence /litre to 16.5 pence /litre in 1999/2000 putting a lot of pressure on dairy markets and leading to considerable industry rationalisation. A lot of the smaller to medium sized units disappeared, but some of the bigger units are expanded. These bigger units will continue to use Holstein genetics and accept the bull calves as a by-product and a disposal problem. They are in a position where they can afford to pay the cost of disposal of bull calves and concentrate on producing the next generation of dairy heifers.

In four years time with sexed semen the surplus calf issue may have changed

While CPAS existed, only the very runt end or the very poorest quality heifer calves were slaughtered and recorded in our bobby calf slaughtering figures, they dwindled to approximately 20,000 during the years that CPAS existed.

A specialist veal industry exists within the UK which amounts to about 4,000 calves annually slaughtered at about 100 kg (dressed weight). Veal consumption in the UK is probably about 2,000 tonnes per year, UK produces about 400 tonnes of specialist veal, the remainder is imported from France and the Netherlands.

UK veal is more like rosa (rosy) veal because calves have access to roughage (bedding) and it is not strictly comparable to white veal. UK legislation does not allow calves to be reared in individual pens, they must be group reared, rumens are allowed to develop as roughage is derived from bedding, calves are fed essentially a milk diet.

The catering industry is the main user of veal in the UK. High quality restaurants in the major cities use white veal. The market for veal in the UK is extremely limited.

The bobby veal industry eventually dwindled mainly because the calves were exported live and then taken up by CPAS. In the past some of the uses of bobby calf veal would have been for the production of stock, mince for pies, baby food etc.

July 1999 was a watershed for the industry, the post PCAS booklet was produced. This booklet provided a check list of issues that had to be considered when deciding whether to rear surplus dairy calves for beef.

MLC stressed that the UK market for bull beef was fairly limited, it was much easier to rear and sell bulls profitably when the UK had an export market that was exchange rate driven. In 1995-96 the UK had a competitive exchange rate. MLC advised that before embarking on beef production, consult with an abattoir, determine band specifications, structure the production, avoid speculative production and enter into a contract if appropriate, production needs to be on a continuous basis.

### **The Bobby Calf Industry**

An ex employee of MLC looked at the historical use of calves. The outcome is that the potential for the market is severely limited. Bobby veal is of low value, as it is tasteless and characterless. It lends itself to be incorporated into small goods, meat pies, pasties etc, it is essentially a protein filler, a cheap

source of protein that can be added to processed products . The only item of any value is the skin for the high quality leather industry. Traditionally a lot of calf hides are shipped to Italy. What we have seen since the beginning of 2000 is a better return for some of the calves going for bobby calf slaughter and an overall firmer tone to the calf industry here in the UK. Could process 100,000 bobby calves in 2000.

There is confusion about when bobby calves can be legally moved off farm. Calves less than 36 hours can be consigned to a knackery, they do not need a passport and do not need to be tagged. Calves can be consigned to a market provided they are more than four days old and their umbilical cord is dry. Traditionally the calves sold through the auction market system are about two weeks old before they are sold.

A lot of calves in the UK are sold by dairy farmers to marketing groups that deal in calves. The marketing group batch the calves and market them onto rearers or the marketing group will have their own dedicated rearers to take them from two weeks to three months of age and sell them as reared calves to specialist finishers. Marketing groups access their calves either through the auction market site or buy direct from the bigger dairy units.

### **Calf Processing Aids Scheme**

The European commission provided the money and the scheme was administered through UK's Intervention Board. Countries had two options re calf reduction, they could either have CPAS or an early marketing scheme which attracted a bonus/subsidy payment for veal calves which encouraged the production of veal calves at a slightly lower weight, based on historical veal carcass weights from the continent. Calves were generally slaughtered a month earlier than usual and averaged 20 kg lighter.

In the veal producing nations of France, the Netherlands, Italy and Belgium the early marketing scheme was widely used. Only the UK, France, Portugal and the Irish Republic used CPAS. UK was the biggest user of CPAS (60-65%).

### **EU subsidy system**

The exchange rates used are the average rates in December in any year. The premium for the following year is determined in December. The premium/ subsidy system applies throughout the whole of the EU.

A BEEF SPECIAL PREMIUM is payable only on male animals including young bulls and steers. The beef special premium can be claimed twice on a steer (initially when the animal is greater than seven months old and again when it is over 20 months old ), but only once on a bull. The last slaughter date is the date it must be slaughtered before it goes into the over 30 month scheme

A farmer can only claim 90 first Beef Special Premiums (BSP's) and 90 second BSP's in a calendar year. There must be sufficient forage area on the farm to ensure the stocking rate is lower than 2 livestock units per hectare. Potential prime slaughter cattle are eligible for the BSP.

SUCKER COW PREMIUM is payable on beef and beef cross cows There must be sufficient forage area to keep below two livestock units per hectare,

Essentially this is a juggle of livestock numbers and land areas to ensure this is grass based production. There are some clauses in receipt of these premiums that nothing is done that may harm the environment.

SLAUGHTER PREMIUM is a new premium under the latest round of reforms where UK has a ceiling of 3.3 million adult animals where all prime and older cattle are eligible for this premium. Starts off at £17 per adult animal and will increase to £50 by 2002. This is in addition to the Beef Special Premium and the Sucker Cow Premium.

Calves slaughtered at greater than one month of age can also attract the slaughter premium, numbers are small and entirely specialist veal producers, it is not CPAS in disguise

The EXTENSIFICATION PREMIUM is an extra reward for farms with a lower stocking density which is payable as an extra top up on either the Beef Special Premium or the Sucker Cow Premium.

A sucker cow with a bull calf, potentially in a year could claim the Sucker Cow premium on the cow, the Beef Special Premium on the calf and the Extensification Premium if the stocking density is low.

Under “Agenda 2000” there is a new base on which to calculate Extensification Premiums, all cattle on the farm on certain dates go into the calculation. A number of private companies have developed systems to assist farmers to maximise subsidies. MLC’s role is to advise farmers of the changes. MLC held 18 meetings around the country commencing in October 1999, there was still a lot of detail unavailable in October, however farmers needed to start thinking about the issue, the MLC’s credibility with the farming community increased significantly as the result of these meetings. Many farmers have just not paid attention to the details and are going to miss out on premiums that are freely available, because they have not picked up the phone and spoken to a consultant.

For the Extensification Premium a basic rate is paid between 1.6 – 2 livestock units per ha and a higher rate if the stocking rate is less than 1.6 livestock units per ha.. A problem that many UK producers have with the new Extensification Premium calculation is that, in the past, heifers did not count in the calculation. Now with heifers included, many producers will not be eligible. In many cases what can be done is to increase claims from the Beef Special Premium, use the Slaughter Premium and on balance more money can be made on the slaughter premium than by finding extra farm area and adjusting livestock numbers for extensification. Producers returns are at an all time low, everyone is in various degrees of despair, it is easy to overlook how much the rules have actually changed and to miss out on an opportunity. For example a company demonstrating its latest software to handle premiums on a farm in SW England, found that once all the information was loaded that the producer was well inside the qualifying criteria for the Basic Extensification Premium worth £5,500.

### **Assurance programs**

MLC’s role has been the broker between the farm and industry (processors and retailers) to determine what type of scheme is actually required.. MLC was instrumental in establishing Farm Assured British Beef and Lamb (FABBL), headquarters of FABBL are in the same building as MLC. FABBL are now linked with Farm Assured Welsh Livestock (FAWL) and two initiatives in Scotland including the Scottish Pig Industry Initiative (SPII) and Scotch Quality Beef and Lamb (SQBL). SQBL is in the process of being wound up and replaced by Quality Meats Scotland, but a new industry body in Scotland will carry out training of SPII and the new beef and lamb scheme.

MLC has provided the prime funding and the proportion of livestock covered by the schemes has increased dramatically since BSE.

The focus is the quality standards by which the animals and kept on farm in terms of husbandry, feed stuffs and veterinary chemicals. There are a plethora of quality assurance programs, many retailers have taken existing programs and added on other criteria. Farms fail on record keeping, rather than on animal husbandry or farm management, reflecting a lack of attention to detail in the farm office.

Pigs are produced and sold direct from farm to abattoir, all the various major processors have their own QA schemes. 90% pigs sold in the UK would be from Farm Assured herds. 80-85% cattle would be from Farm Assured herds. 50-60% sheep would be covered, mainly as sheep originate from more diverse units all round the country, the main finisher units where they arrive from the store sale may be Farm Assured, however the farm of origin may not be. There are 60 day residence requirements, if stock from a non-assured unit stay on an assured unit for 60 days, they qualify for assurance.

Currently there is an attempt to stream line the farm assurance process, there are too many organisations, currently a single farm may be subject to three or four different audits. There is hope that the process will be rationalised under an organisation known as Assured British Meat, now known as Assured Foods – the trade mark will be a little red tractor. This mark means that the product has entire chain assurance, as opposed to farm assurance. Only product that was grown on a farm assured premises, sold, transported, processed to a standard, can carry the tractor mark.

QA schemes have sprung up on an ad hoc basis, now the UK has its new Food Standards Agency in place (came into being on 1 April 2000) it is an opportune time to take stock and rationalise all the different schemes and drive the cost out of the system as there are bound to be cheaper and easier means of delivery of audit.

The incentive to become farm assured was to attract a premium for product. As multiple retailers increase their share of meat sales in the UK there is an expectation that QA is required at all points along the production chain, QA will set the standard, those that do not participate will receive discounted prices. QA is now required to retain market share, it is an intrinsic part of production, a statement on quality of production and a guarantee of conformity to a standard. QA programs are not a problem where there is good animal husbandry. In the past there was a huge resentment of auditors coming onto farm with clip boards, now farmers have moved away from the concept that someone is coming to check up and audit for compliance to a standard is seen in a positive light.

The bigger farms become, the more dependant they are on QA. The older semiretired farmers drift off and their farms get amalgamated into bigger units.

## **University of Bristol Department of Veterinary Clinical Studies, Toby Knowles**

### **Transportation of calves**

Calves that are transported young, and kept alive following transport, have an increased mortality in the six weeks following transportation. UK calves are only allowed to be transported after seven days of age. Five to seven day old calves do not so much die during transportation, but they tend to pick up infection and to be stressed. Toby is currently trying to get research money to look at mortality post transportation.

Is it reasonable for five day old calves to be transported to slaughter??

It is difficult to say, I imagine the measurements that we could envisage making (beta hydroxy butyrate, dehydration etc) would probably look OK, mortality would be low. The weaker immune system will be compromised by transport, but that is not going to affect the well being of the calf at that particular time. Calves will meet a range of pathogens at a time when their immune system is not able to compensate, however calves are going to slaughter. It is likely that the calf would be tired or disorientated more than it would be otherwise. They would need to be well looked after.

Rules for transportation of young animals

Avoid really hot weather. Avoid really cold weather, biggest physiological changes in calves are measured in really cold weather, they do not manage to regulate their body heat very well and if they do get cold, body heat fluctuates and continues to do so for a while after transportation.

Calves like to lie down and they need to be given space so that they can all lie down comfortably. Calves will lie down when they are transported if they are bedded well. Bedding will allow them to keep warm. If they lie down they will not get tired.

The suggestion to pack them in so that they help support each other is "bull shit" – they need space to lie down, when they are lying down they are OK

The bottom line

Avoid the cold

Provide lots of room to lie down

If it is going to be cold, bed them

Probably OK to transport them young if they are going to be slaughtered

If they are to be reared, what is the best way to transport them?

Looking at the literature, it looks as though it would be better if they were older, how much older I am not sure, a balancing act between improvement in immune function and avoidance of disease.

Are electrical prods/ goads useful?

Use of prods is a total waste of time, calves will be wound up some more and then weakened, their use on calves is prohibited in the UK.

Feeding intervals

From the work we have done it looks as if there is not much point in trying to feed them during journeys of 25 hours – the differences we see in the ones that are fed and the ones that have gone the distance without being fed are minimal. When we do feed them we only give Lactade for rehydration.

Provision of water

Toby imagines that it would be a good idea to have water at the abattoir as long as they have drunk properly before they are shipped – with a British climate, they tend to be fine for 18 – 20 hours and do not get any measurable dehydration.

CPAS no longer provides an avenue for disposal of bob calves, a number of calves are being disposed of either through hunt clubs or knackeries as farmers do not like to slaughter calves themselves.

If calves are disposed of before 36 hours there is no need to apply for a passport and tag the calves (a saving of several pounds which off sets the cost of disposal). These calves are transported before seven days, people are turning a blind eye, that often happens in welfare legislation.

**University of Bristol Department of Veterinary Clinical Studies, Professor Webster**

### **Bobby calf management**

The Brits really have no policy at all because for a long time we did not have surplus calves, but with BSE and with the Holsteinisation of the dairy industry, it has hit us between the eyes. We now have a problem, but we do not have a system. It appears that the seven day rule is not enforced for calves disposed of at hunt clubs and knackeries.

We will discuss what used to happen and what could happen and the welfare implications of the whole thing.

In the 1980/s the UK dairy industry was remarkably well integrated in an economic sense with European agriculture such that there were really no bobby calves. The industry had practically eliminated the full dairy breeds of the Ayrshire, Guernsey and Jersey, which did generate a thoroughly depressing, serious bobby calf market 40 –50 years ago.

In the 1980's the dairy industry was running on the British Friesian black and white, which was an acceptable animal for meat, either as intensive beef or as somewhat substandard calves for veal.

In the early 1980's black and white calves were fetching £100- 160 per head, as a consequence there was no bobby calf business, there was a veal trade and we were exporting 300,000 live calves per year to Europe, most of them from the autumn calving.

The very right and genuine welfare concerns about veal under continental systems and the greater and perhaps less justifiable public concerns about the exportation of animals in general and big wide eyed calves in particular, impeded the export trade on calves and dropped the price of black and white calves. It was acceptable in the eyes of the public to send calves to Aberdeen, but appalling to send them to France. Then BSE came and threw the whole thing wide apart. Superimposed on this we had the Holsteinisation of the dairy breed, essentially we now have a vast amount of surplus male calves and the problem has only exploded in the last three years. Following the removal of the Calf Processing Aids Scheme (CPAS), we now have valueless calves.

As a consequence of having valueless calves, whether we like it or not, the amount of care that we give to animals is defined by their value to us. We now have a problem of surplus calves which have no cash value.

A few people are now playing with high welfare veal systems (which can be done). A lot of work was done in 1980's on high welfare systems, which was instrumental in getting the laws changed. We showed that the minimal recommendations that we made for veal calf production improved not only the welfare in the public concept of the behavioural aspects of welfare, but directly improved the health of veal calves by normalising the digestive tract.

Veal does remain an option, a market can be created for these sort of animals, but it has to be a market that has to be marketed, there is, for example, a very small RSPCA Freedom Foods Veal trade now, which is very high welfare veal.

A market has to be created for surplus calves.

British Friesian types still make good bull beef some producers are rearing bull beef to 18 months, this is made difficult by the Holsteinisation of the dairy industry.

### **Special fed veal vs slaughter at five days, which calf is better off?**

Webster believes that they are better off dead quickly. Calves in veal crates abuse all the five freedoms. Calves are kept in a barren environment and become incredibly easy to spook as they are not exposed to the normal sight and sound of farm activities. During transportation calves can hardly stand and they have trouble moving. The abnormality of the diet is the major problem, the diet prevents rumen development and leads to iron deficiency. Infectious disease is a major problem, veal cannot be reared without blanket antibiotics. However as far as the public is concerned the individual crates are the most severe problem.

The Dutch were claiming that they were rearing high value veal where they were penning the calves together on slats. Because of the price of calves in those days they had to take them to a higher body weight up to 300 kilograms. These calves were starting to ride one another, faeces is expelled horizontally and is slimy. Calves covered in faeces were slipping and sliding in appalling conditions, much worse than individual crates, the manager was aware of this but said that if that was what the welfarists want, that is what they could get. This is a good example of milking of public squeamishness.

### **Fitness to travel**

Pre export inspection of calves was carried out by veterinarians. Calves had to weigh more than 50 kg live weight, calves under this weight were being stomach tubed to fill them up to increase their live weight. A competent vet should be able to decide if a calf is fit to travel. If it cannot stand, or is in pain or dehydrated, or if it is exposed to a high risk of infection by virtue of the fact that it still has a wet navel, it is not fit to travel. This decision should be made considering the outcome of a clinical inspection, not on arbitrary parameters such as age or weight. There should be a fitness to travel examination and there should be an inspection on the way to make sure they are OK.

The 50 kilogram rule for live export calves led to the "30 day calf or veal starter units", the biggest calves were exported at less than two weeks of age, but there were many people who reared calves for "so called" 30 days. Transportation at 30 days of age is not recommended, calves suffer a set back as the result of the journey and a change of milk powder and rearing system.

Provided the conditions on the vehicle are satisfactory both thermal and comfort wise, calves lie down to travel. Webster believes that calves travel better than yearlings because they lie down and rest. If the vehicle is good, the driver is good, the roads are straight, there is not a lot of difference to being in a lorry compared to being in a shed.

## **Killing on farm**

Slaughter on farm is a serious option, especially as farming units are getting bigger.

If a calf is going to have a poor life, it might as well be killed as soon as possible. It is in everybody's interest to kill it as soon as it hits the ground. This is not suggesting that the farmer should kill them, they could be killed on farm by a competent slaughtermen working from a pick up vehicle, dead calves could be transported to a disposal site, where some product could be salvaged (eg the hide). This system is welfare friendly. There is the need to make a distinction between what is good for the welfare of the calf and squeemishness. So much of the public perception of welfare and often farmers perception of welfare is not welfare, it is squeemishness.. So many of the anti meat eating TV programs allegedly criticising welfare standards at slaughter houses have shots of someone butchering a pig, there are no issues if it had a good life and death.

One could make a strong case on welfare grounds for killing on farm, especially if killing is done by a licensed slaughterman, such as hunt club operators. (The banning of hunting, if it happens, will be the ultimate disaster for fallen stock, hunt club kennels are the salvation of some of our diary farmers). The economics of killing calves on farm has to be considered. More dead calves can be transported on a lorry compared to live calves, calves do not have to be managed or fed.

Is the need to feed calves to be slaughtered on farm?

All calves need some nutrient and liquid and electrolytes, this might as well be in the form of colostrum, however there is no need to worry about getting the right quality and amount within the correct time frame.

The problems of slaughter are very short lived in terms of all the stressors imposed on an animal in the last day or so of its life. From the time it leaves the farm to the time it is approached in the stunning box the welfare objective should be to minimise the duration and intensity of all these stressors and so killing on farm has to be the best welfare option.

Killing on farms would give producers an option, if they complain about the time and cost of managing bobby calves for sale for slaughter, they should have a low cost option to dispose of them on farm. Those who want to sell calves for slaughter can do so as long as they comply with the code. Do not impose a solution, increase the options.

## **Freedom Foods**

Started at the University of Bristol, Alister Mews who worked at Bristol (he was the Chief Veterinarian of the RSPCA) battled through the Freedom Foods concept, which is based on the concept of the Five Freedoms, essentially as Webster originally wrote them.

*The Five Freedoms are*

- 1 *Freedom from thirst, hunger and malnutrition* – by ready access to fresh water and a diet to maintain full health and vigour.
- 2 *Freedom from discomfort* – by providing a suitable environment including shelter and a comfortable resting area.
- 3 *Freedom from pain, injury and disease* – by prevention or rapid diagnosis and treatment.
- 4 *Freedom to express normal behaviour* – by providing sufficient space, proper facilities and company of the animals own kind.
- 5 *Freedom from fear and distress* – by ensuring conditions which would avoid mental suffering.

The logic of the Five Freedoms was that they would be based on an evaluation on the welfare state of the animals, almost irrespective of how it was achieved. The implication was that if you were satisfied with the welfare of animals the farmer could carry the Freedom Foods logo and market foods accordingly.

Freedom Foods was one of the first welfare based Quality Assurance (QA) schemes, it has made very good market penetration in certain areas, particularly in eggs (90% of all non cage eggs are Freedom Foods).

Freedom Foods have almost 2,000 dairy farmers in the scheme with nearly all of the product is going to syndicates for specialist cheese production and hitting a specialist niche which attracts a substantial mark up. (However nothing like the mark up that organic milk is getting at the moment which is a 60% mark up on standard prices.) Unigates', (one of UK's big milk distribution units) QA Scheme attracts no mark up, it is a box checking system that a vet can complete for a farmer in 30 minutes, there is no premium for it. Farm Assured British Pigs (FABP) also attracts no premium, every pig farmer in Britain is going to these standards which are equivalent to the Farm Animal Welfare Code.

QA programs tend to be about doing what is expected and maintaining market share. To get a premium, you need to do something better and the consumer has got to pay for it.

Freedom Foods is based on the Five Freedoms, however it has become more burdened with bureaucracy and is largely a box ticking exercise, dominated by the quality of the husbandry rather than the welfare of the animals. There is a lot of checking of the bedding, size of cubicles. This is honourable as it is the responsibility of the farmer to provide good husbandry, good stockmanship, good resources, good housing and good records etc and if that is done there is a reasonable probability that the elements of good animal welfare status will be achieved. It is also much easier to assess the provisions of good husbandry. However the real question is "Is the welfare state of the animal good or not?" Are there scruffy farms with happy cows?

Bristol are contracted to do an independent audit of the Freedom Foods Scheme. Freedom Foods is an independent company set up by the RSPCA. Freedom Foods employ auditors. The pig provision now has 256 boxes to check, of which only seven relate to the welfare state. RSPCA have monitors who check on the auditors, but using exactly the same system – it is in effect a double audit.

Bristol is independently addressing questions such as, "Does the Freedom Foods scheme achieve a high welfare state?", "Does it achieve a better welfare state than farms that are not on the Freedom Foods Scheme?", "How can we improve the system?".

Bristol's audit of Freedom Foods is funded through the RCPA by Tesco, who are one of the major buyers of Freedom Foods. We have now devised and road tested elaborate ways of assessing welfare state (actually the animals own perception of their welfare) of laying hens and dairy cows and calves (currently working on pigs). When we go onto farms we advise the farmers that that the Freedom Foods Scheme is being assessed, not the farmer. When we have the answers we will address the questions, it is too soon to predict the outcome.

RSPCA monitors are now going onto farms in a very well controlled fashion and not doing the standard RSPCA assessment, but doing a completely independent assessment of the welfare state.

The Freedom Foods **dairy cow assessment** starts with a self assessment, which is absolutely essential for any QA system (most assessments do not start with a self assessment). The point of self assessment is that the people who are working in the farming system every day know most about the system, more so than someone who comes in for a couple of hours. It is not sensible to expect a guy to come in for three hours with a clip board and tell a farmer what they are doing right or wrong. The intention of the assessors visit is to actually test or challenge the self assessment. It is not aggressive, a lot of information can be obtained this way and it is also possible to test attitude in the self assessment. Following the visit the farmer receives a provisional report for comment.

Information on culling is collected. Are the stock fit and happy, or more precisely, can they sustain fitness? They should not be broken down prematurely (difficult for broilers and a lot of Holsteins) and they should avoid suffering (which can be defined in a sentient creature) and perhaps achieve some pleasure. Fit and happy can be built into a scientific assessment.

Involuntary culling is the obvious criteria of failure the sustain fitness, so there is a need to look for reasons for involuntary culling. Look at questions re attitude in a subtle way, for example questions such as, "What do you look for when you inspect the herd?", "How do you identify sick cows in the

herd?”, “What do you do if you observe a lame cow?”, “How do you keep the cows happy?” give knowledge of husbandry and attitude. Cutting a cabbage for a downer cow to give her something extra may not be doing a great deal for the cow, but tells a lot about attitude and stockmanship.

Look at behavioural issues including freedom of movement, rumination cycles, flight distances, skin irritation (pressure sores etc) aspects of social behaviour, teat end lesions, lameness score. Select a number of older and younger cows and get the lactation number, stage of lactation and body condition, look at changes in body condition, if cows are in poor condition, determine reason.

Once data from the independent audit is analysed, Freedom Foods may use it to redesign their audit. Webster is happy for Freedom Foods to audit against the provisions which will allow a correlation of observations of welfare state against records of provisions. Bristol should be able to identify what is important and what is not, most of which will be self evident, however there may be a few surprises.

Bristol would recommend to the RSPCA that the assessors should simplify their assessment methods, concentrate on those issues known to be critical for a good welfare state, remember the original aims of the Freedom Foods Scheme (ie to meet the Five Freedoms) and adopt a few robust indices of welfare state, those that do not have big between observer variation.. The monitors should use the Bristol system in the future.

### **How is welfare taught to undergraduates?**

In the first lecture on their first day undergraduates hear about the Five Freedoms from John Webster. The understanding is that welfare should pervade the entire course. All members on being admitted to the Royal College of Veterinary Surgeons repeat the Veterinary Hippocratic Oath that they will observe uprightness of conduct etc. The final sentence of the oath is “My constant endeavour will be to ensure the welfare of animals committed to my care.”. Webster gives them this sentence at the beginning of the course. He then gives them an idea of what welfare is. Bristol has the biggest tradition of animal welfare, it started in Bristol in a professional sense. In the first year an element which deals with veterinary ethics is undertaken mostly as “directed self education”, where ethical issues are addressed in groups of four or five students, for example kidney transplants in cats. The final year is a lecture free year with a clarking system. Small groups of students work with a member of staff, welfare assessments are built into preventative medicine farm visits, hence students do welfare based audits in final year. The vast majority of students are obsessed by the concept of animal welfare.

When Webster wanted to develop the science of animal welfare people suggested that there was no science of animal welfare. There is now an animal welfare science which is a combination of science and ethics, those issues which are science and those which transcend science give one a proper attitude to welfare.

The Royal College of Veterinary Surgeons are now offering a certificate/diploma in animal welfare which Webster has always been involved with. Most holders of the certificate either work at Bristol or have been through Bristol. Eight to nine people per year do it, mostly veterinarians, but also some researchers.

The Certificate / Diploma in Animal Welfare is a distance learning program with supervisor /tutor involves welfare, science, ethics and law.

### **Cambridge University, Don Broom**

#### **What is the best thing to do with surplus calves?**

This issue has been discussed at Farm Animal Welfare Council (FAWC – Broom has just come off the council after nine years) and the general view and also Broom’s view is that the sooner unwanted calves are killed the better. This is provided they are killed properly (ie by someone who is appropriately trained and facilities and equipment are adequate).

The best thing to do if a calf is completely unwanted is to kill it on farm. The proportion of unwanted calves varies a great deal depending on market price, even Holstein calves may be reared. Some

regulations eg the Calf Processing Aids Scheme (CPAS) have encouraged farmers to keep calves for longer than they have wanted and transport them when they did not need to be transported.

Very young calves do not seem to be enormously disturbed by transport if it is done well, but it often is not done well when calves are not worth much and there is no extra value obtained by treating them well. If you are only going to get a subsidy payment and nothing more in financial terms for treating them well, then the chances are that their welfare will be compromised.

Most dairy farmers are keen to treat animals well and do not like a system where the calves are going to be killed. They feel much happier if the animals are going to leave the farm to be reared elsewhere, even if they are not paid anything extra for the calves. Situations where calves are killed early are not popular with most dairy farmers. If calves were to be killed, a lot of farmers would not want to do it, this is tied up with an attitude about animal welfare and an attitude about waste.

Veal production is not very economical, need a very interested market for it to be worth while. Unless you have a very special market for veal and it is worth a great deal more than beef, it is better to keep them for longer, especially if it is an animal which has not got a great deal of meat on the carcass.

The EU and a number of other countries have passed laws to improve animal welfare, notably USA and Japan and others have not and are trying to prevent anything which restricts trade on the basis of animal welfare. At the Seattle World Trade Organisation (WTO) the EU moved that methods of production should be considered in world trade, for example, rearing veal in crates is banned in the UK, therefore veal from calves reared in crates in other countries should not be allowed into the UK, this did not get much support and it was reported that Australia was one of the countries that did not support the notion (Broom thought that Australia was one of the countries that might).

Need to have some sort of standardisation of legislation, however the biggest pressure for improving the welfare of animals in Europe is from the big food retailers, the supermarket chains and the fast food chains, because they have been lobbied by their customers to the point where all the major players in the UK have now set up standards, which the farmer must meet in order to supply. These standards include public health and environment and especially animal welfare. Tesco's for example is an international company and they have their own standards including a prohibition of keeping sows in stalls. Denmark, who has a big trade with the UK, with Tesco's their biggest market, has moved away from sow stalls, even though Danish law does not yet prevent sows being kept in stalls. If Tesco's buy from Taiwan, or Canada or Australia, then farmers supplying product will have to comply with Tesco's standards and Tesco will check up.

The big food companies are conducting more inspection than the ministry, they cannot afford not to as they cannot afford to be in the news papers.

The European Commission has a veterinary inspection office whose job it is to ensure that the farm animal legislation is enforced. The job of the inspectors is to make sure that each aspect of EU legislation has a mechanism for enforcement in each member state. It is the responsibility of the member state to put the legislation in place. There is variation between the member states in the extent of enforcement, for example there is very tight enforcement in Germany, the Netherlands and UK and less enforcement in Greece, Italy and Spain. However all member states have agreed that the system will be brought up and will be equal across the EU.

Legislation on slaughter is easy to enforce, there are a limited number of slaughter houses, can have a vet in each one. Legislation on transport is harder to enforce, but still possible because transport passes by particular places. Legislation on housing systems is more difficult as it has to be done on farm and the chances of any particular farm being audited by a state veterinary service ever is very low (this needs to change, farms need to have a greater chance of inspection).

Breeding is the less well covered by legislation. If an animal is bred, knowing that a caesarean birth is required, it is difficult to prosecute in most EU countries. The exceptions being Germany and Sweden where, if an animal is bred, and as a consequence of the breeding there is a welfare problem, then it is against the law.

In practice British legislation regarding movement of calves off farms uses the umbilicus as a means of determining the age of the calf, the umbilicus has to be dry and shrivelled. However it is not possible to accurately determine the age of the calf by the dryness of the umbilical cord/

How do we manage the way the public perceive the bobby calf industry?

It is a moral issue, the primary consideration should be the welfare of the animals, if that was our aim then we would slaughter appropriately on farm (with proper training of those doing the slaughtering).

In any agricultural system animals are produced which are eventually going to be killed, the welfare of the animal should be good throughout the life of the animal, whatever the value of the animal. After that, does it matter how long it lives? Is there something morally wrong about killing broiler chickens at 35 days old when the fastest growing ones are getting to two kilograms by that time, or is it morally better to keep them for twice as long? Broome does not think there is a difference, but some people would.

Given that at the moment we cannot avoid the production of unwanted animals, the best thing to do is to kill them humanely as fast as possible.

There is another way to go, the arguments are not the same in this country because we can, on average, use the bull calves, cross breeding with beef bulls can also be used.

Currently about 85% beef production in the UK is from dairy cows, still have solely beef farms (used to farm Hereford and Angus, now farm Charolais and Simmental). Dairy farmers have basically taken over most of the beef production, most of the beef eaten in UK comes from dairy cross animals. In the UK beef production occurs on poorer pastures, best grazing land occupied by the dairy industry, worst by sheep.

### **Transport**

When examining the extent to which animals are disturbed by a journey, young calves are less disturbed than older animals. They are somewhat disturbed by everything that happens to them, however it is not the case that they are worse off than older animals as the result of transportation.

Calves are more susceptible in anything that is going in the disease sense and they are more likely to be injured and bruised which creates a need for bedding. The UK industry does not usually use bedding but Broome believes that they should, maybe rubber matting would help. Older animals are going to stand up during transportation and hence have less need for bedding. Cattle and sheep will for example stand for an eight hour journey and then, if there is a rest time and sufficient space, will lie down. When travelling, adult sheep or cattle do well if they can stand side by side, they need enough room to make adjusting movements. Ideally the vehicle is driven properly without lateral movement, but when they stop, they need more space (either off loaded, or pens opened into empty pens if the truck is not full. Pigs have to be able to lie down throughout the whole journey, young calves up to 3-4 months will lie down. The cost of transportation is significant, the tendency is to jam them in because they are going to slaughter anyway – this attitude is not logical as good welfare means better meat quality.

The only use for an electric goad is to satisfy the needs of the operator who maybe tired, sick of handling young calves and not kindly disposed to them because there are so many of them. Cutting corners including younger age at transportation, lack of attention to feeding and housing conditions and crowding on trucks makes loading and unloading much more difficult and leads to the belief that electric goads are useful.

### **World view of calves**

All the main animal issues are bigger topics in wealthier countries, with one or two exceptions. In India cows cannot be killed or injured – a religious attitude in a very poor country. Cattle have a very comfortable life in India – they are allowed to graze and are well fed because they are revered.

On the whole, richer countries look after calves better, however the other variable is that there are differences in traditions. For example in countries where there is an attitude that man is having to

battle against nature in order to survive (the frontiers man attitude in the US and to a lesser extent in Australia) people are more likely to be cruel to animals (to show how macho they are). Differences in attitude are not just a matter of money, some have enough money.

### **Ministry of Agriculture, Fisheries and Food Sheep and Beef Division, Richard Cowan**

Richard is a senior administrative civil servant trained as an economist, he runs the Beef and Sheep Division of the Ministry of Agriculture, Fisheries and Food, which is responsible for providing advice to Ministers on the management of the markets for beef and lamb and for support systems available to those who depend on those markets.

The UK has relatively little experience of adding value to calves. UK have a very small veal industry, perhaps seven or eight dedicated producers.

Prior to the imposition of the EU ban on UK exports of cattle and beef products in March 1996, most of our bull calves from the dairy herd were exported to France and the Netherlands for rearing as veal. Exports ran at about 500,000 head per year and the UK trade in veal and bobby veal accounted for about 25,000 head.

Following the imposition of the export ban, there was no market for dairy-bred bull calves and UK introduced a slaughter scheme under EU rules, the Calf Processing Aids Scheme (CPAS) which paid a considerable premium for calves slaughtered at less than 20 days old. It was a condition of the scheme that the resultant product did not enter the human food chain, though it could be used as pet food. UK slaughtered about 2 million calves under this scheme between April 1996 and July 1999, when the scheme was terminated.

As a result of the ending of CPAS, the market for dairy calves has virtually collapsed. Some beef producers are prepared to take on dairy-bred bull calves for rearing as beef, perhaps with a final market in the manufacturing sector (e.g. for hamburgers etc). Two operators in the UK are now looking seriously at developing a veal industry on the Dutch model, with a view in the first instance to processing some 500 head a week. The economics of this depend critically on the UK price for dairy-bred calves being well below that in France or the Netherlands. That situation is likely to prevail for so long as UK exports of live calves are banned, but once the ban is lifted, prices will rise again and the UK industry is likely to be on too small a scale to compete effectively with the Dutch. The UK operation is thus a short to medium-term stop-gap.

In the meantime, our understanding is that the majority of UK dairy-bred calves are being slaughtered on farm as soon after birth as possible, and disposed of into the pet-food market.

## CONCLUSIONS

There are many animal welfare concerns in the animal industries, the surplus calf issue is perhaps the most significant facing the dairy industry. It is important that industry accepts that this is an area for improvement and work cooperatively with the community, welfare groups and legislators to effect change.

Animal industries need to demonstrate commitment to high standards of animal welfare to meet changing community demands and the requirements of customers (domestic and export) and the community for socially responsible management of animals.

We need to review our Animal Welfare Codes in light of what may or may not be acceptable to those we trade with. We should be in a position to undertake official auditing to prove the level of compliance with our Animal Welfare Codes and use labelling to confirm compliance as a market protection initiative.

EU member countries and others who may follow their lead are going to ensure that they are not disadvantaged in trade by third countries operating systems which they may believe are less stringent. We must promote and capitalise on our pasture based systems, where grazing animals are allowed to graze, outdoors on pasture (compared to intensively housed and concentrate fed systems) and not destroy our green, clean image by poor welfare practices (for example substandard management of surplus calves, or removal of body parts (such as tail docking which is considered to be a mutilation by some trading partners). Improve our image and educate our trading partners who still mostly think our grazing systems only allow for the survival of the fittest.

## RECOMMENDATIONS

Encourage government and welfare groups to form partnerships with industry to improve compliance with agreed standards and improve standards where necessary. Continue with education, build code requirements into quality assurance programs where possible and encourage industry self-regulation. Be prepared to accept that in some areas, industry will fail to self regulate and decide when it is appropriate to develop legislation. Ensure any legislation is enforced and enforceable. Seek incremental improvements.

Animal welfare science is a young and emerging science if compared with animal health and public health. Some veterinary and agricultural schools recognise this and are beginning to teach animal welfare science and ethics, this should be promoted and encouraged by industry and government.

There is a need to put more effort into auditing to define current performance of the bobby calf industry against the code of practice and to promote the Animal Welfare Science Centre Dairy Industry Audit. The aim of the audit is to collate existing welfare information with additional data from the literature and from experts into one document to provide a comprehensive welfare audit tool for the dairy industry.

The purpose of the audit documentation is three-fold

1. To provide documented evidence of the quality of animal care
2. To identify and monitor issues associated with the quality of animal care
3. Identify and monitor human resource and behaviour issues associated with quality care.

Several countries have codes of practice for welfare and there are audits associated with marketing of “welfare-friendly” systems, for example, Freedom Foods in the UK.

Documentation for the Dairy Industry Audit has been prepared by a Management Group comprising representatives of farmer groups, animal welfare groups, teaching and research organisations, commercial companies and those with a legislative interest. The management group has a high degree of ownership of the project.

The code of practice has been examined against industry practices and questions are determined. There are two types of questions:

1. Critical questions, those which must be complied with to pass an audit
2. Good practice questions, those which reflect the current state of knowledge and its practical implementation in the industry. The purpose of these questions is educational and to provide an indication of changed practices for the future.

The dairy industry welfare audit documentation is nearing completion.

### Survey data

Southern dairy regions of Victoria have a five per cent demonstrated non-compliance with calf selection codes (mostly wet strings) 15 per cent non compliance has been recorded in previous cold wet seasons. Northern dairying regions of Victoria have a much lower demonstrated non-compliance with calf selection codes, less than one per cent non-compliance rate.

Some attempts have been made to collect survey data on transportation times and distances and time between farm gate and slaughter. A well structured and organised national survey is needed.

### Bobby calf declaration

A joint industry and government meeting was held in January 2000 to discuss compliance with the bobby calf provisions of the Code of Accepted Farming Practice for the Welfare of Cattle. The meeting agreed to establish a working party to develop a Vendor Declaration (Bobby Calves). The declaration was to ensure recognition that calves met the minimum standards when they left the farm.

The Victorian bobby calf industry, led by processors through the National Meat Association of Australia and supported by the Department of Natural Resources and Environment, Australian Meat Council, AQIS, Livestock Transporters Association of Victoria, the Victorian Stock and Station Agents Association and the United Dairy Farmers of Victoria, signed-off on the Bobby Calf Declaration. It has been updated and is now used nationally and is known as the National Bobby Calf Vendor Declaration. The declaration made by the vendor (farmer) is counter signed by the person taking delivery of the calves, the calf buyer, transporter or saleyard agent. Its use is voluntary, however some procurers and processors of bobby calves require that a declaration accompany all calves that they buy or process.

Calf buyers are generally enthusiastic about the declaration. The declaration provides a perfect excuse for them to reject calves that do not meet code requirements on the basis that they are protecting the dairy farmers best interests, without fear of losing farming clients to less scrupulous buyers.

#### Calf buyer / handler / transporter / accreditation

There is a need to develop a package that could be used to train or retrain calf handlers. Calf buyers need to comply with the Code of Accepted Farming Practice for the Welfare of Cattle, they must be aware of requirements for selection, handling, holding and transportation. A training package is required that provides this information and information on calf behaviour and physiology and the impact of management on ease of handling, mortality and dressing percentage etc. Often calf handling technique is learnt on the job and many inappropriate handling techniques need to be removed from the repertoire of some calf handlers.

Farmers and others who manage livestock must also understand that animal welfare standards have the potential to impact on world trade.

#### Euthanasia guidelines

Euthanasia guidelines for surplus calves for farmers, calf buyers / transporters and abattoirs are needed. Euthanasia guidelines have been developed and written up in the Victorian Department of Primary Industries Ag Note series and attached in appendix. 2. A less expensive captive bolt gun (the Blitz Slaughter Pistol) manufactured by Jorgen Kuuse in Denmark has been imported and is now available in Australia (see appendix 3 for supplier details).

#### Legislation

Some consideration needs to be given to referencing some of the bobby calf provisions of the Code of Accepted Farming Practice for the Welfare of Cattle in legislation. Cage size for hens is now legislated and a breach of the Victorian Code of Practice for the Care and Use of Animals Used for Scientific Purposes is grounds for prosecution under part 3 of the POCTAA without the need to prove cruelty.

Electric goads are routinely used on bobby calves contrary to the code. The only use for an electric goad is to satisfy the needs of the operator who maybe tired, sick of handling young calves and not kindly disposed to them. Cutting corners, including younger age at transportation, lack of attention to feeding and housing conditions and crowding on trucks makes loading and unloading much more difficult and leads to the belief that electric goads are useful.

Ban the use of goads and provide an enforceable penalty for their use. Industry has failed to self regulate in this area.

#### Transportation

Work is required to specify calf transport vehicles of the future. Loading densities need to be determined and written into the code. Survey to determine current transit times and distances and determine if these are acceptable. Regulate transport times and distances (preferably across state lines). Provide education for calf transporters.

Time in transit and distances travelled can be excessive, calves are not necessarily slaughtered at the closest abattoir. This may well be the major issue affecting surplus calf welfare post farm gate.

Surplus calves are transported in vehicles designed for other classes of stock, there are major deficiencies in their design for both long and short distance transportation of calves. Top decks are uncovered causing problems in cold wet weather, calves frequently fall from the top deck while in transit, bottom decks receive effluent from the decks above. Calves get wet when they lie down and are reluctant to lie down on cold, hard surfaces. Loading densities during transportation have not been specified in the code. The loading density should allow calves to lie down while being transported. Bedding is provided in some other countries.

#### Processors / procurers

There is a need to audit calf management at abattoirs and during transportation.

Carcass yields and mortality are influenced by a number of off-farm factors including handling time, time off feed, transit time and conditions. To ensure acceptable surplus calf welfare standards abattoir operators must:

- Incorporate the code, particularly the section relating to abattoirs and those sections on selection, handling and holding of calves into existing QA systems and observe these requirements
- Aim to achieve the shortest possible time from arrival to slaughter – delayed slaughter is common during the peak calving months
- Ensure that facilities such as unloading ramps, holding pens and feeding facilities are provided and maintained in a condition that ensures the code is complied with (often the gradient of the unloading ramp is too steep)
- Cooperate with auditing teams
- Undertake ante-mortem inspections and only accept calves that meet the required standards
- Ensure a system is in place for the prompt identification and humane euthanasia of sick, injured or weak calves

Areas requiring more investigation - provision of water and feeding following delayed slaughter.

Processors have supported the bobby calf declaration to ensure that calves meet minimum standards at the farm gate. Processors now need to be made accountable for their management of calves at abattoirs and in transit to abattoirs. Processors who are contract killing calves for a third party have less incentive to improve calf management at the works.

#### Holding facilities

Calves are often held in open yards with no bedding, they quickly become cold wet and dirty in poor weather. Standards for holding facilities are described in the code. Industry needs to comply with the code and consider introducing a penalty for non compliance.

#### On farm slaughter

Offer alternatives to rearing calves to the fifth day of life, such as humane slaughter on farm very soon after birth. Those who want to sell calves can do so as long as they comply with the code of practice. Those who do not have the time or resources to manage surplus calves on farm for their first four days of life will have an alternative.

#### Value adding

Support industry in seeking opportunities to value add, for example dairy bull beef production removes surplus calves from slaughter and eases the pressure on transportation and abattoirs at peak calving times.

## **APPENDIX 1**

### **Welfare of surplus calves in Victoria – field considerations**

The following paper was written in 1998 for the 20<sup>th</sup> World Buiatrics Congress held in Sydney in July 1998. It was during the preparation of this paper that I decided to apply for a Churchill Fellowship to study the management of surplus dairy calves in some other developed countries.

## **APPENDIX 2**

### **Euthanasia guidelines**

## **APPENDIX 3**

### **Blitz slaughter pistol – availability**

The “Blitz Slaughter Pistol” is a relatively low cost captive bolt pistol manufactured by Jorgen Kruise of Denmark. Captive bolt equipment is not subject to firearms legislation and can be used and owned without a firearms licence.

The importers of the Blitz Slaughter Pistol are:

DLC Australia Pty Ltd  
17-19 Horne Street  
HOOPERS CROSSING 3029

Ph	03 93609 700
Fax	03 93 609 994
Toll free	1300 785 405
Email	<a href="mailto:info@dlc.com.au">info@dlc.com.au</a>
Website	<a href="http://www.dlc.com.au">www.dlc.com.au</a>

## APPENDIX 4

### Calf management in the first week of life – video DVD

#### Availability

A video / DVD on “Calf Management - the first week of life”

“*Calf management – the first week of life*”, a 14 minute video/DVD outlines the principles which ensure a good start to life for calves to be reared, such as dairy heifers, bull beef, dairy cross calves and bobby calves that are intended for sale for slaughter. The DVD/video was produced to present the code requirements, and the reasons for the requirements in images with narration to dairy farmers and other industry personnel. It aims to encourage change, where necessary, in calf management practices, especially for bobby calves.

Anyone wanting to obtain or borrow a copy should email [sue.hides@dpi.vic.gov.au](mailto:sue.hides@dpi.vic.gov.au), giving name, and address and stating whether a DVD or video is required.

#### Script

Video - Calf management – the first week of life

Audio

- 1) Managing heifer and bull calves in their first week of life can be challenging, but rewarding. There are several guiding principals which will ensure a good start for dairy heifers, bull beef and dairy cross calves to be reared and humane and considerate treatment of bobby calves intended for sale for slaughter. All calves, whether for slaughter within the first week of life, or for rearing, should receive the same treatment.
- 2) Calves are usually collected from the calving paddock or pad at least once in every 24 hour period
- 3) Calves should be identified - brass tags, management tags and NLIS tags for calves to be reared and a collar with the date of birth for bobby calves
- 4) It is good practice to provide additional colostrum to calves within their first 24 hours as insurance against disease. The tube feeder is quick, effective and easy to use, get your vet to teach you.
- 5) Colostrum should be thick and yellow and collected at the first milking of cows following the full term birth of their second or subsequent calf. Colostrum can be stored in bulk and carried on the calf collection vehicle or kept at calf pens for new arrivals. All calves, including those intended for early slaughter, should be supplemented with colostrum to provide immunity to prevent the spread of calfhood disease.
- 6) A colostrometer can be used to check on the quality of the colostrum
- 7) Shelter from wind and rain is important as is provision of clean well drained bedding, such as saw dust or rice hulls for calves reared in close confinement
- 8) Water should be available from birth, it is essential that calves become familiar with water, especially if they are to be transported young

- 9) If calves have been tube fed on the day they come into the rearing pens, they can be left to rest and taught to suck from a teat, or taught to drink, the next morning
- 10) Calves can be taught to suck by starting them on a bottle and teat. They are best taught using fresh, warm milk
- 11) When they start to suck vigorously, they can be transferred onto a teat on a feeder, some re-positioning at the feeder may be required!
- 12) Calves can be taught to drink by allowing them to suck on your fingers and then lowering your hand into a bucket of milk.
- 13) By the end of the first week of life most calves are enthusiastic feeders – management will mainly involve offering milk and rearranging calves at the feeder to ensure none miss out. Calves should be fed the minimum of the equivalent of 10 per cent of their body weight (4 litres for a 40 kilogram calf) per day in one or two feeds. Two feeds per day is preferable for the first week of life.
- 14) Ensure that all calves are feeding. If not decide why not and take appropriate action. Sick calves should be isolated immediately and treated appropriately
- 15) Calves should have access to fibre or straw and where early weaning is desired, calves should have access to calf starter pellets
- 16) Calves intended for sale must meet minimum standards as described in the bobby calf provisions of the Code of Accepted Farming Practice for the Welfare of Cattle
- 17) Calves must be on their fifth day of life or older. A system to identify a calf to its day of birth is essential. Collars made from rubber inner tubes can be made up, the date of birth and other details can be written on the collar. Numbered ear tags can be attached to collars, and calf details including date of birth can be recorded against the number on the tag.
- 18) The umbilical cord must be dry and inflexible to the junction with the skin. When calves are sheltered from the elements and kept on well drained bedding such as rice hulls or saw dust, most umbilical cords dry by the third day of life. Check the cord before offering the calf for sale.
- 19) Calves should be well fed and receive a substantial feed within six hours of delivery to a sale point or collection from the farm. Do not sell any calf that has not fed and is hollow sided. The majority of calves are slaughtered the day after they leave the farm of birth – so it is important that the last feed at the farm is a substantial one.
- 20) Only select calves for sale on the day of sale. All bobby calves must be tagged prior to sale. It is good practice to tag calves with the official bobby calf ear tag on selection for sale to avoid selling very young calves, sick calves or calves with wet strings. Calves that are not for immediate slaughter should also be tagged with an NLIS tag.
- 21) Calves for sale should be free of antibacterial residues and never fed milk from cows within the milk withholding period following treatment with antibacterials. Calves treated with veterinary medicines must be withheld from slaughter according to the label directions of the drug used.
- 22) Calves must be bright, alert and strong. Listless or dopey calves or those showing any other sign of weakness or illness, including scours, must not be sold. If the resources are not available to treat, house and feed these calves until they are fit to travel and free from any bacterial residues, they should be slaughtered humanely on farm
- 23) Calves must be a minimum of 23 kilograms liveweight

- 24) Bobby calves frequently travel long distances to abattoirs and it is essential that they are well prepared on farm and well managed after they leave the farm, if they are to arrive fit and well at their destination
- 25) Calves must be handled with care, without the use of dogs or electrical prodders and be transported in clean vehicles/trailers with enclosed fronts and flooring or bedding to minimise slipping, calves must have space to lie down.
- 26) A bobby calf declaration has been developed with input from all sectors of industry to assist producers to document the welfare and residue status of bobby calves. To protect the wellbeing of your industry, and your calves, you must satisfy all the provisions of the declaration. A system must be in place to ensure calves presented for sale are on their fifth day of life, well fed, sheltered, well cared for and individually inspected for suitability for sale and free from antibacterial residues.
- 27) Animal Health and Welfare staff from the Dept of Natural Resources and Environment conduct regular audits of calves at saleyards, scales, depots and abattoirs. Regulatory action will be taken if calves are found to be suffering as a result of non-compliance with the bobby calf provisions of the Code of Accepted Farming Practice for the Welfare of Cattle or if a false declaration has been made on the Bobby Calf Declaration
- 28) There is an increasing level of public awareness and concern both domestically and internationally regarding animal welfare, with the potential for significant damage to occur to the meat and dairy industries in the event of adverse public comment on the management of bobby calves. Now is the time to look at your system and identify areas for improvement.
- 29) Audit documentation is available from the Animal Welfare Centre or Department of Natural Resources and Environment to assist you in this process if not already covered in a company QA program.
- 30) The success of calf rearing operations is strongly influenced by the management of calves on the property of birth, help others add value to calves that may otherwise be slaughtered at an early age, by giving all calves a good start.

#### Video

- 1) Healthy young calves in a pen
- 2) Collecting calves from the calving paddock in a trailer
- 3) Heifer calf being tagged with a brass tag and NLIS tag, bobby calf being collared
- 4) Demo of use of an oesophageal feeder
- 5) Pouring colostrum from a test bucket into a 20 litre container
- 6) Colostrometer
- 7) Calf shed (at MRF??)
- 8) Water trough in a calf pen, with calves drinking or investigating the water
- 9) Young calf sleeping
- 10) Calf being fed with a bottle

- 11) Calf being introduced to a gravity feeder with teats
- 12) calf drinking out of a bucket
- 13) A group of calves at a feeder, sucking vigorously
- 14) Sick pen
- 15) Pellets and hay
- 16) The code booklet
- 17) writing date of birth on inner tube calf collar and putting it on a bull calf /numbered ear tag on collar
- 18) close up of a dry umbilical cord (calf held resting on its hind quarters)
- 19) calf with hollow flanks / bulging calf following a substantial feed
- 20) tagging calves with the official bobby calf tag
- 21) calves being loaded into a calf buyers trailer on farm / calves in a sale yard
- 22) calf running around a calf pen
- 23) calf being weighed (on Jorgensen's truck)
- 24) calves being loaded – Ken Jorgensen's truck at Maffra saleyards and calves off loaded at an abattoir – preferably Castricums Dandenong
- 25) inside of a clean trailer with wind protection and non slip floor, preferably one covered with straw
- 26) new bobby calf vendor dec book with close up of a vendor dec – possible someone filling it in
- 27) staff auditing at abattoirs
- 28) panorama of dairy country – herd grazing at MRF?
- 29) CD cover of Welfare Audit CD
- 30) Bobby and Ray Dennis' dairy cross steers

## **APPENDIX 5**

# **Report to the National Consultative Committee on Animal Welfare on the use and management of surplus dairy calves in some developed countries and some future strategies**

### **Surplus dairy calves – their use and management in some developed countries**

Sue Hides  
Senior Veterinary Officer Gippsland  
Department of Natural Resources and Environment  
PO Box 335  
MAFFRA 3860

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Surplus dairy calves presented problems for all developed countries visited. Our situation is unique as the majority of calves are slaughtered within their first week of life. Elsewhere a significant number of surplus calves were raised for special fed or grain fed veal or dairy beef. Various schemes for adding value to calves have been promoted in Victoria with none reaching long-term viability. Industry has recently invested in the facilities to process bull beef and this is a growth area in the Victoria beef industry. In 2000 approximately 600,000 bobby calves were slaughtered in Victoria, for an average price to the farmer of \$34 per head. Predictions for 2001 are that a significant number of bobby calves will be reared and the number slaughtered in Victoria will be down 15-20 per cent. Opening prices for bobby calves this season are also higher than last year.

Many calf rearing systems provide significant challenges. The transportation and co-mingling of colostrum deficient calves from many sources challenges the immune system and calf rearers rely heavily on antibiotics and mortality rates are high. Individual stalls, while reducing the spread of disease, prevent social contact. Special fed veal calves are confined for the entire production cycle and kept on slats, they are fearful of any change in routine and require very high levels of management especially during transportation and at slaughter. Value adding does not necessarily improve the well being of the surplus calf.

All countries visited with the exception of the USA had standards for minimum age at transportation, either in legislation or in codes of practice. This standard was set variously between four and seven days of age, however in practical terms the condition of the umbilicus (must be dry and withered) and the ability of the calf to walk unaided were the key criteria for fitness to travel. It appears that many calves were transported within two to three days of birth despite the seven day rule. Currently there is no reliable method to clarify the age of a neonatal calf other than the condition of the umbilicus.

The value of surplus dairy calves was significantly higher in all other countries reflecting supply and demand for calves for rearing. Despite the price of surplus calves, dairy farmers are predominantly concerned with cow and heifer management, calves that are not reared as replacements have by-product status on many farms in all countries visited. Other industries that rely on surplus calves have developed education programs for dairy farmers and offered incentives for “conditioned calves” with variable success.

Increased value of calves did not ensure better management on the property of birth. Generally as demand for calves increased the price increases and quality decreases and less effort is put into smaller calves because if calves are in good supply calf growers avoid them and if they are in poor supply calf rearers are forced to buy them if they want to fill their sheds.

Of the countries visited the USA was the least sensitised to farm animal welfare issues. In most countries industry has worked with government to develop legislation or codes of practice outlining

minimum standards and worked to make livestock systems “animal friendly”. The animal industries in the USA are reluctant to describe minimum standards for fear that these standards may be legislated, however in response to public pressure the American Veal Association developed a code for special fed veal production.

Animal welfare issues have a high profile in Western Europe. Legislation relating to farm animal management is on the increase in the European Union. In NZ, Australia, Canada and the USA welfare legislation is predominantly anti-cruelty, with “accepted” management practices protected or exempt from cruelty laws.

There is an increasing concern that progress with animal welfare standards may be threatened by the World Trade Organisation. The European Union want animal welfare issues to impact on trade. Our grazing systems in Southern Australia are animal friendly and provide us with significant advantages over confinement production systems, we should capitalise on these advantages.

Transportation of surplus calves is one of the challenges facing Australia, our vehicles are substandard when compared with other countries, and distances from farm to abattoir can be excessive.

If semen sexing becomes a commercial reality, the breed and sex of surplus calves can be pre-determined. Market forces will dictate if dairy farmers breed specific dairy cross “surplus calves” for a specialist market, or use small dairy breed bulls, concentrate on ease of calving for cows producing calves surplus to heifer replacement requirements. Depending on demand and price for bobby calves, if small dairy breed bulls are used it may well be more humane and economical to slaughter these on farm soon after birth.

The well-being of farm animals is a growing concern to an increasing urban population. This emerging social concern cannot be dismissed as the province of extremists. Animal welfare is an emerging science and is ranked as one of the three major challenges of agriculture in developed countries, the others being environmental protection and food safety. Often extreme opinions prevail when an issue reaches public attention. Bobby calf management is an issue of concern for Australian livestock industries, it must continue to be dealt with proactively and rationally.

## New Zealand

Of the 1.8 million bobby calves born annually in NZ, 1.3 million are slaughtered within their first week of life, 0.5 million are reared for the bull beef trade.

Bobby calf management is very similar to the Victorian situation with the following exceptions.

NZ has started to overcome the by-product status of the calf – Dairy Meats NZ is now focusing on maximising cash return through attention to quality, value adding and marketing and the bull beef trade accounts for a growing number of Friesian bull calves.

Dairy Meats NZ procures and processes, on a contract basis, approximately 75 percent of the 1.3 million calves at seven works. Dairy Meats was established over ten years ago by the NZ Dairy Board to assist farmers in the disposal of cull cows and bobby calves and to increase returns for farmers for these classes of stock.

Calves are purchased on an “over the hooks” basis – payment is based on quality. Bar coded procurer tags.

No electric goads used.

Research program at Massey on the effects of food withdrawal and transport on five the ten day old calves.

Transportation – covered trucks in poor weather, no goads, not thrown on and off, not packed in, not trans –shipped, slaughtered at the closest works.

Water consumption of calves in lairage – Lindsay Matthews Ruakura.

## USA

High prices for bobby calves were the result of competition between beef feedlotters and veal producers. Few calves were being slaughtered as bob calves. Beef numbers were down as the result of low prices over the last few years and beef producers were buying Holstein bull calves to grow out to 545 kilograms liveweight for the dairy beef market. The buoyant economy had led to an increased demand for veal and as a result, veal prices were high.

There are three types of veal recognised in North America, bob, special-fed and non-special-fed.

Bob veal or bobby veal is processed at a liveweight of less than 68 kilograms, usually within the first week of life.

Special fed, formula fed, fancy or white veal is a tender, pale pink meat, from calves fed only a liquid diet made primarily from milk products in which the iron content decreases in the through the last half of the production cycle. The special fed veal calf is slaughtered at a liveweight between 180-220 kilograms at 18 - 24 weeks of age.

Non special fed, red veal also known as grain fed veal, rosa veal, welfare friendly veal or baby beef is a tender, dark pink – red meat from calves fed a milk based and grain diet for 6-8 weeks, followed by a grain or grain and pasture diet. Grain fed veal calves are raised to a liveweight of 273- 391 kilograms at approximately 7 months of age.

In the eastern states most surplus dairy calves were destined for special fed veal production. Calves are kept in ventilated rooms on slats in individual crates which are 65 cms wide and two meters long. Generally there are two rows of thirty crates down each side of the room with a central aisle. Calves are fed twice per day. Proponents of individual stall systems contend that air temperature and humidity can be more adequately regulated, wastes can be more efficiently handled, cross contamination of

pathogens between calves lessened and individual observation, feeding examination and medical treatment accomplished with less handling. Carcass quality and size are more uniform when calves are individually fed and housed.

Most Californian bull calves go into calf ranches for rearing for the feedlot industry, very few enter the bob calf trade, those who do are not suitable for value adding for reasons such as size, conformation etc.

Calf ranches rear both dairy heifer and bulls calves from day old, heifers are reared on contract for dairies and bulls are reared on contract to the feedlot industry. Colostrum management on the farm of origin is variable, and calf ranches rely heavily on the use of antibiotics and vaccinate for salmonella and respiratory diseases. Bull calf mortality in the first 60 days of life is generally between 10-15 percent, heifer calf mortality is lower, generally about 4% (attributed to better colostrum management at birth and less co-mingling of calves from multiple sources). Mortality is highest in July and August, the hottest months, in calves less than 15 days old. Most common cause of death is diarrhoea. Antibiotic use on calf ranches is extensive with antibacterials administered parenterally to sick calves and added routinely to milk in therapeutic doses.

Average price paid for bulls calves in California is \$50 (US), in March 2000 the price was \$80.

Calves are crated (crates are constructed from timber and provide sufficient room for calves to lie down and turn around) and fed milk replacer until weaning at approx 60 days, hard feed is provided from day 5 onwards, with a transition feed ration offered in the crates for five days prior to weaning. At weaning calves are grouped and put into corrals (community housing). Bulls are grown out to around 123 – 136 kilograms at 110 –115 days of age and shipped to feedlots where they are grown to 500 kilograms at approximately 15 months of age.

Most labour is from Mexico ratio of calves to each labour unit is 200-250:1 (a work force of 40 on a 9,000 calf ranch).

The USA cattle industries are facing issues that arise from the management of surplus dairy calves. Dr Temple Grandin has identified poor treatment of newborn calves as one of the major animal welfare problems for the dairy industry in the USA. Calves often leave their property of birth for slaughter within their first 24 hours of life. These calves are difficult to move and rough handling at loading and off loading and the use of electrical goads is not uncommon. However travel times in California are generally 1-2 hours and calves are generally slaughtered on the day of arrival at the abattoirs.

Agricultural industries in the US are wary of change and reluctant to concede on animal welfare issues. Agricultural industry is not of the mind set to have government involved in the development of codes of practice. Industry can find it difficult to defend some situations and farming practices but is reluctant to describe what are acceptable management practices for farm livestock species for fear that these guidelines may be put into regulation.

The quality of dairy bull calves “returning –to-farm” for special fed veal and dairy beef production is a major concern to the veal and dairy-beef industry. A survey of 131 calf buyers and auction markets in Pennsylvania conducted in 1997 found that many of the calves purchased had identifiable problems, 12 per cent had a wet navel, 7 per cent had trouble walking, 24 per cent has scours or respiratory problems and 23 per cent were dirty. There is now some attempt to pay a premium for “pre-conditioned” calves in an attempt to reduce calf morbidity and mortality and increase liveweight gains in rearing units.

The primary concern is the sufficient intake of colostrum. There are regional differences in colostrum intake of calves, with colostrum deficiencies observed in 80 per cent of calves entering Californian calf rearing units and 20-40 per cent of calves entering calf units in Pennsylvania.

In mid 2000, the average price per calf in Pennsylvania was \$218 (US) (compared to \$60-70 (US) per calf in 1999) as demand increases, price increases and the quality of calves goes down. Smaller calves generally do not perform well on veal farms due to poor management before they leave the dairy farm. Dairy farmers usually do not put any effort into smaller calves because if calves are in good supply,

veal growers will avoid them and if calves are in poor supply veal growers are forced to buy them anyway.

The American Veal Association (AVA) have been active with the dairy industry in the development of a Calf Care Protocol for dairy bull calves which aims to improve health and quality of bull calves leaving dairy farms.

The five principal animal welfare / animal rights organisations working to improve the welfare of calves include

Farm Animal reform Movement (FARM)  
Farm Sanctuary  
Humane Farming Association in California  
Humane Society of the United States (HSUS)  
People of the Ethical Treatment of Animals (PETA)

These organisations are concerned that farm animals in America have been subjected to increasingly inhumane conditions as the direct result of factory farming practices and that many practices common in animal agriculture are being excluded from legal censure. “Thirty states have enacted laws that create a legal realm whereby certain acts, no matter how cruel, are outside the reach of anticruelty laws as long as the acts are deemed “acceptable” “common, “customary” or “normal” farming practice. These statutes have given the farming community the power to define cruelty to animals in their care.”  
David Wolfson – Beyond the Law

The Humane Society of the United States (HSUS) was founded in the 1950’s and promotes animal protection and humane treatment of all animals including wildlife, farm animals, animals in research and companion animals. HSUS has an annual budget of \$35 million (US) by fund raising and public subscription. HSUS is strongly opposed to factory farming on both environmental and humane grounds and works with industry and consumers to help promote the family farm. HSUS undertake investigative field work to uncover animal abuse and offer rewards for information leading to prosecution for acts of cruelty. HSUS will bring cases to public attention through the media and force enforcement agencies (often the police) to act.

HSUS aims to create awareness of the environmental and ethical costs of factory farms and to encourage consumers to reduce or replace animal based foods in their diets. They aim to inform the public of the differences in production methods in factory farms compared to family farms and encourage consumers to reject factory farm products and help create a market for products from farms using more humane, sustainable practices.

Their “tips on humane living” are as follows: “Try following the 3R’s: reduce your intake of animal based foods, refine your diet by eating more humanely produced food, and replace animal based food with non-animal food.”

HSUS work through education in schools and the public arena, consumer campaigns and campaigns to encourage the public to engage in the political process and give voice to animals in the legislative arena to build a body of law to protect animals. HSUS do not engage in demonstrations or civil disobedience, where possible they aim to build bridges with industry and have provided funding to livestock organisations to promote humane treatment of animals for example HSUS funded the upright restrainer for religious slaughter designed by Temple Grandin.

HSUS take a pragmatic approach to animal protection. They believe that people are going to continue to use animals, they do not promote vegetarianism and abolition of food animal agriculture, (this is a matter of personal choice) they aim to bring about changes that result in more humane treatment.

HSUS reports that there is little information on the management of bob calves. HSUS understand that it is not uncommon for calves that cannot walk to be transported to auction barns for sale. HSUS have video footage of calves being thrown, dumped, prodded, inhumanely destroyed etc and would consider it a tremendous victory if calves had to be able to walk before they left the farm.

An abstract on surplus calves prepared for the American Society of Animal Science / American Dairy Science Association meeting in July 2000 by Suzanne Millman, of HSUS

*“Neonatal calves present unique problems for those transporting and marketing them. Recently, the dairy industry has been criticised for failing to ensure adequate care for surplus calves. In this review of the scientific literature, attention is drawn to factors affecting the welfare of surplus calves in transit, and suggestions for improvement are presented. According to the USDA, approximately nine million dairy cows and heifers calved during 1999. Assuming that 50% of these calves were males, 4,500,000 bull calves were culled or marketed. Of the 1,042,000 calves that were slaughtered in federally inspected plants, 42.9% were bob veal and 52.4% were formula fed calves. If federally inspected plants are representative of the industry, there were at least 1,017,000 neonatal calves transported during 1999, either to a formula fed veal production unit or directly to slaughter facilities. Neonatal calves are particularly vulnerable during transportation and marketing. Calves have behavioral needs that differ from needs of older livestock. For example, calves spend 18 hours per day resting. Young calves also have specialized feeding requirements, and may fail to recognize milk and water, even when they have been provided. Furthermore, calves respond differently to methods used to handle other types of livestock. Since calves lack strong motivation to herd together and lack strong fear reactions, they cannot be driven away from handlers. Neonatal calves are also particularly sensitive to pathogens and environmental temperatures. In the United States, legislation protecting the welfare of surplus calves is limited. The dairy industry seems unable to address this issue, since the low value of surplus calves provides producers with little economic incentive for improvement. Countries in the EU have developed legislation in response to the welfare problems associated with transportation of young calves, and Canada has developed recommended codes of practice. Possible mechanisms for improvement within the US dairy industry are discussed.”*

HSUS is opposed to veal crates and supports group housing of veal calves.

One of the barriers to “humane” food products in supermarkets is price. When asked, people say that they would pay more for “humane” food, but in practice many of them do not. However there is still enough demand to make it viable to sell “humane” food products.

Farmers will argue that because they rely on animals for their livelihood, they are not going to compromise the welfare of those animals and will do what is best for the animals. HSUS describes this as “the production myth” because factory farm profits depend on the optimal use of labour, space and equipment and not on the well being of individual animals. HSUS argue that animals have “been selectively bred for productivity at the expense of their well-being and are worn out in a fraction of their natural life spans” and “the reality is that drugs, hormones and other chemicals are routinely administered to animals in intensive confinement systems to mask stress and disease and to speed growth”.

USDA Animal and Plant Health Inspection Service (APHIS) Animal Care Unit

APHIS is one of the 30 or so agencies within the USDA. Within APHIS there are five units including Animal Care. The Animal Care Unit administers the Animal Welfare Act and the Horse Protection Act.

Ninety five per cent of the units’ resources are allocated to the administration of the Animal Welfare Act to protect cats and dogs and animals in biomedical research, exhibits, zoos and circuses.

The Act protects many animals not raised for food and fibre and was passed in 1966 largely to protect the welfare of dogs and cats following publicity about kidnapping of pets for research and about poor conditions under which dog dealers kept animals. This law regulated dealers who handle dogs and cats, as well as laboratories that use dogs, cats, hamsters, guinea pigs, rabbits, or non-human primates in research.

Farm animals are exempt from the purview of the Animal Welfare Act, with the exception of farm animals used in research. There is no federal, on farm, regulation of farm animals. Every state has anti-cruelty laws that vary from state to state. Level of enforcement also varies from state to state.

The USA does not want to open itself up to “on the farm standards for animals and to potentially open the door for those kind of issues to be directed at trade”. India recently proposed a summit to develop multi-lateral animal welfare standards to cover companion, research and farm animals. The USA will be considering its position carefully before deciding whether to participate or not.

USA government has encouraged industry to self regulate, the National Cattlemans’ Beef Association has developed industry standards for care and housing, the American Veal Association has done the same in response to very negative public opinion.

The veal industry came close to on farm regulation when veal calf production was given a lot of national media attention. The public was abhorred by the conditions that animals were held in and by the fibre and iron deficient diet. Bills were introduced before congress to regulate veal production. Largely in response to that potential for regulation, the industry wrote guidelines to self regulate. “There are varying opinions as to how well they do that, but they have done it well enough to defray an effort to introduce federal legislation”.

If there is enough video tape and enough public concern, agricultural industry opposition to farm animal welfare legislation may be overcome and Agricultural Committee may act and give a recommendation to the whole House or Senate in favour of the new legislation

Although there is no federal regulatory oversight of farm animals welfare, increasing concern and visibility of farm animal welfare issues has led to the formation of a group within in United States Department of Agriculture (USDA) called the Farm Animal Welfare Task Group. This is a senior level group made up of:

- the Undersecretary for marketing and Regulatory Programs
- the Administrator of APHIS
- the Administrator of FSIS
- the Undersecretary for Food Safety
- other senior officials

At this forum animal protection and industry groups can come to the USDA and air farm animal welfare issues, eventhough there may not be any specific regulatory intervention. It was in response to some of these concerns that an initiative started with Temple Grandin relating to stunning practices in meat plants. Dr Grandin pointed out the inadequacies of the Humane Slaughter Act and FSIS has responded and is probably doing a better job today than it was.

The Farm Animal Welfare Taskgroup also identifies the need to provide funding for research into specific animal welfare issues.

## **Canada**

In Canada, the goal of recommended codes of practice for the care and handling of farm animals is to describe optimum standards. The codes of practice for the care and handling of farm animals are referenced in the Manotoba provincial legislation. Canadian agricultural industries in other provinces fear that codes may eventually be written into legislation and hence codes tend to be written to describe minimum standards, (regulation defines minimum acceptable standards). Industry would like to see the codes as complimentary to regulation, with codes providing the flexibility to cope with rapid change that regulation cannot provide.

The Canadian Agrifood Research Council (CARC) manages the development of the Recommended Codes of Practice for the Care and Handling of Farm Animals. CARC have developed a process for writing and distribution of the codes. The CFIA would like to see the codes of practice used as they are nationally without modification, however some of the provinces take the national code and other material that they may have and make their own versions.

The Canadian veal industry occurs in Quebec and Ontario, following the same distribution pattern as the dairy industry in the east of the country. The majority of male dairy calves in the west of the

country (British Columbia, Alberta) are raised for feeder steer production. Bobby veal is not a large business.

A drop in cow numbers on dairy farms (cow numbers down but production is up) has caused problems with the supply of bull calves, Canadian veal producers need to source calves from the US.

There are significant problems with dairy bull calf health management on the dairy farm. Colostrum management and post natal management can be variable. Education programs directed at dairy farmers have increased the supply and quality of bull calves to the veal industry. In mid 2000 new born bull calves were bringing about \$200 (Canadian)/head, the five year average price per head is \$85.

It is not currently permitted to slaughter calves less than 14 days of age at federally registered slaughter establishments, unless the product is going to be exported. The prohibition, in some abattoirs, on slaughtering “immature animals” is related to the production of “immature meat”. The benchmark for “mature meat” is set at 14 days of age. There are no age at slaughter restrictions at non-federally registered establishments in some of the provinces including Quebec and British Columbia.

As a result of New Zealand’s interest in exporting bobby veal to Canada, New Zealand demonstrated that meat from calves less than 14 days of age was no different from meat calves over 14 days of age. As a result Canada accepted that the 14 day rule was not supported by scientific evidence and hence was arbitrary.

Canada has been trying for the past ten years, especially since 1996, to change the regulation relating to age at slaughter. A number of proposals have been put forward to amend the meat regulations to remove the age limit, but there has been strong opposition on animal welfare grounds relating to the transportation of very young calves. The solution to the impasse will be to reference the part of the Recommended Code of Practice for the Care and Handling of Farm Animals – Veal Calves in the regulations. The age restriction will be removed but at the same time a higher standard of husbandry and transportation as described in the code, will be imposed.

The Recommended Code of Practice for the Care and handling of Farm Animals – Veal Calves, has set the minimum age for transportation at seven days, but for practical purposes the main areas of concern would be whether the calf is steady on its feet and has a dry umbilicus. In practice, calves are “probably leaving the farm within two to three days of birth”.

Loading densities are written into the veal code and there are minimal problems with transportation of young calves as they all have room to lie down in transit.

Veal producers source calves locally where they can, but bigger operations have to source calves up to ten hours travel time away.

By referencing the transportation part of the Veal Code in the regulation, part of what is a voluntary code, with respect to transportation to federally registered slaughter establishments, will be mandatory. A penalty will be prescribed in the regulation for anyone in breach of the code. The regulation will not apply to calves transported for slaughter at non-federally registered provincial abattoirs.

Referencing part of the veal code in the meat inspection regulations is a precedent, however it is seen as an interim measure. The Health of Animals Regulations relating to transportation are currently being amended with the view to strengthening transportation regulations for all species. When this is achieved and there are strong provisions for enforcing the humane transport of bobby calves, the reference to the veal code is likely to be withdrawn from the meat inspection regulations.

Legislation relating to animal management is on the increase, there is concern that animal welfare issues may impact on trade of animal products. However Canada’s concern about the importation of bobby calf veal is not related to the welfare of calves in New Zealand, but is related to food safety issues and product suitability for human consumption - “How New Zealand treats its animals is New Zealand’s business. The New Zealand bobby calf story has been an exercise in regulation making, trying to satisfy the domestic stake holders and at the same time meeting international trade obligations with respect to New Zealand”.

## Brussels

France Italy and the Netherlands are the biggest veal producers in Europe.

In Western Europe, animal welfare issues have achieved a high profile, leading to large scale public protests and petitions signed by millions on issues such as live animal transport. Improved legislation and procedures has lead to comparatively high animal welfare standards in the European Union.

A public campaign sought to have animals classified as sentient beings rather than products within European Treaties. As a result, in 1997, the EU adopted a protocol on the protection and welfare of animals, wherein the Community and Member States undertook to pay full regard to animal welfare in forming and implementing relevant policy and legislation.

There is increasing concern that this progress may be threatened by the World Trade Organisation (WTO). The WTO was established in 1995 superseding the regime created by the General Agreement on Tariffs and Trade. Since then there has been controversy about the impact of international trade rules on domestic policies with non-trade objectives.

Nearly all animal welfare concerns arise from production methods that are not detectable in the final product, known as non-product related Process and Production Methods. There is nothing in the WHO that prevents a country from raising its own welfare standards however there are two significant trading obstacles to raising standards:

- the cost of production increases, leaving producers competing against cheaper imports produced by more cruel methods
- raising animal welfare standards is closely linked with non-product related Process and Production Methods (PPM's) but any distinction among products based on methods of production is disallowed under the articles of the General Agreements on Tariffs and Trade (GATT)

The European Union believes the WTO will undermine measures taken to protect high welfare standards. For example the European Commission proposal to improve conditions in which laying hens are kept, in particular by increasing the minimum size of living space for each hen will incur high set up and production costs. This will make eggs produced by third countries with lower welfare standards less expensive and increase the demand for cheaper eggs produced using methods worse than those the EU is proposing to phase out. The proposed improvement in EU policy will be undermined unless appropriate Process and Production Methods distinctions can be made in relation to eggs imported from third countries.

This example demonstrates the conflict between WTO rules and attempts to raise animal welfare standards. For goods produced under differing welfare standards to compete on an equal footing, non-protectionist trade-related measures may be needed.

WTO members and officials have proposed multilateral agreements and voluntary labelling schemes as alternatives.

Labelling of products to identify the process by which food products are grown and letting the consumer make the choice is not seen as a solution by the EU. Welfare groups including the Eurogroup for Animal Welfare do not like the labelling option as it only influences a small percentage (up to 15 per cent) of consumers. The concept of free range eggs gets lots of support in surveys, but when it comes to paying extra money at the supermarket, consumers opt for the lower price of battery hen eggs.

The European Commission want animal welfare issues to impact on trade. The Eurogroup for Animal Welfare would like to handle welfare standards at the boarder and preferably have a third party equivalent status re welfare. For example importation of eggs would be prohibited unless accompanied by a certificate saying they were produced in a manner equivalent of better than methods of production in the importing country.

The European Commission does not see that the notion that there should be international standards of animal welfare as an answer, as any standard agreed internationally, would be a lesser standard than currently exists within EU directives.

The EU directives relevant to calves include:

91/629 Council Directive of 19 November 1991 laying down the minimum standards for the protection of calves confined for rearing and fattening.

97/2/EC Council Directive of 20 January 1997 amending Directive 91/629

97/182/EC Commission Decision of 24 February 1997 amending the Annex to Directive 91/629/EEC laying down minimum standards for the protection of calves.

Since 1 January 1998 the following provisions have applied to all newly built or rebuilt facilities and from 31 December 2006, these provisions will apply to all facilities.

### Article 3

- No calf shall be confined in an individual pen after the age of eight weeks of age, unless a veterinarian certifies that its health or behaviour requires it to be isolated in order to receive treatment. The width of any individual pen for a calf shall be at least equal to the height of the calf at the withers, measured in the standing position, and the length shall be at least equal to the body length of the calf, measured from the tip of the nose to the caudal edge of the tuber ischii, multiplied by 1.1.
- Individual pens for calves, except those for isolating sick animals must not have solid walls, but perforated walls which allow calves to have direct visual and tactile contact
- For calves kept in groups, the unobstructed space allowance available to each calf shall be at least equal to 1.5 square meters for each calf with a live weight of less than 150 kilograms, at least 1.7 square meters for each calf with a live weight of 150 kilograms or more but less than 220 kilograms, and at least equal to 1.8 square meters for each calf with a live weight of 220 kilograms or more.

Article 8 of directive 91/629 states that “In order to be imported into the community, animals coming from a non-member country must be accompanied by a certificate issued by a competent authority of that country, certifying that they have received treatment at least equivalent to that granted to animals of Community origin as provided for by this directive.” This article was written before World Trade Organisation Sanitary and Phytosanitary Agreements were written and as such is not currently valid. However quote - “we are not able to exclude anything coming from outside on the basis of welfare, but we aim to do it..... the intention of the Commission is not to protect the market, it is to ensure that animal welfare standards are the same”.

In article eight of Council Directive 98/58/EC of 20 July 1998, concerning the protection of animals kept for farming purposes, the EU was been charged with the exercise of looking at third country animal welfare legislation from a technical (not legal) point of view. The outcome of the examination of animal welfare legislation of 74 third countries was imminent in mid 2000. The European Commission should know more about the worlds’ animal welfare legislation than any other body, it will be the first time that a comparison has been made.

Under the European Union Animal Transport Directive of 1998 animals must be fed and watered every eight hours and are entitled to a 24 hour rest at the end of the journey. This directive and subsequent modifications deal with training of livestock handlers, feeding and watering and resting after eight hours. The EU are now focusing on ways to avoid having to stop to prevent co-mingling of animals at staging points and the subsequent risk to the health of animals.

Calves less than a week of age are not transported or slaughtered in Europe. Some member states have specified 14 days as the minimum age for the transportation of calves. There is impending legislation

whereby animals have to be ear tagged within three days of birth and records kept. In theory if this system works the age of a calf can be checked against the record.

To monitor compliance with EU directives, the EU generally requires member states to inform the Commission of the results of inspections carried out during the previous two years. In addition the Commission has a Food and Veterinary Office based in Dublin where there will eventually be 200 inspectors to inspect member states and third countries.

### **Netherlands**

1.2 million veal calves reared per year. There are approximately 1 million surplus dairy calves from the dairy industry in the Netherlands (1.6 million dairy cows), with the rest imported from Poland, Belgium, Denmark and France. Advice from veal producers was that “calves at one week of age arrive at the farm”, calves imported from Poland maybe between 1-6 weeks old. Primarily white veal production (special fed), limited pink veal produced.

All calves are registered and tracked.

### **Denmark**

The dairy industry in Denmark comprises 11,000 herds with approximately 685,000 milking cows., Surplus dairy calves grown out to 8-9 months of age for baby beef (pink veal or veal rosa) production. Jersey bull calves are frequently destroyed on the farm when new born (slaughter guidelines for Jersey bull calves sent out to all Jersey producers). Some surplus calves are sold to the Netherlands for white veal production.

White veal production is not prohibited in Denmark, however it does not occur as Danish society believes that it is an unacceptable way to treat calves.

Calves cannot be moved from their herd of origin until they are two weeks old. \$125 (US) paid for a Friesian bull calf between 2-4 weeks of age in mid 2000, the Dutch pay approximately \$30 (US) more for calves for white veal production in the Netherlands.

Salebarns have disappeared from Denmark, one survives more by tradition than by function. Cattle are sold on an internal network, agents are still involved, but no saleyard step in the process.

Some baby beef farmers have their own trailer and they have specific dairy farms who supply them with bull calves.

All cattle are registered on a central data base, all records must be no older than seven days when added to the computer.

About 60,000 Danish calves are “branded” or raised under a trade mark which specifies production standards.

There are about 13 trade marks including the Government Trademark and the Friland trademark. Ninety five percent of this trademark production supplies the domestic market. The key features of the trade names are that calves have been housed on deep litter and have sufficient space and social contact with other calves, calves have to be group housed from four weeks of age. The government brand has a high standard, however most consumers are not prepared to pay more. “The media are concerned about animal welfare on behalf of the consumer – the consumer is more likely to choose the cheaper cut of veal in the supermarket”.

Danish requirements exceed the EU standards for space allowances for calves.

Profitable farming in Europe involves management of the farming enterprise to maximise subsidies. There are no EU subsidies for baby beef (aim for 330-340 kilograms liveweight at about nine months

of age – 180 kilograms dressed weight), many producers now grow young bulls on to 450 kilograms liveweight to attract a subsidy from the EU.

Welfare and ethical problems associated with surplus dairy calves in Denmark include the destruction of day old calves and the transportation of calves to the Netherlands for white veal production. The preferred method of slaughter of day old calves on farms is by captive bolt and bleeding, however farmers do not like cutting throats and there is variable success with captive bolt alone.

Danish welfare law dictates that calves must be anaesthetised during dehorning (xylazine and a cornual nerve block is used - very quick and efficient).

### **United Kingdom**

In the late 1970's early 1980's between 200,000-300,000 calves were slaughtered into the bobby veal industry. Cow numbers reduced following the introduction of milk quotas in 1983/84 and at the same time dairy farmers started to add value to their bull calves by using a higher proportion of beef bulls in their dairy herds. At that time the dairy animal blood line was mainly British Friesian, a dual purpose animal.

From the mid 1980's the Holstein became the most favoured dairy sire and by 1995 the UK was exporting 500,000 Holstein bobby bull calves annually. The calves went into veal crates in the Netherlands, Belgium, France and some to Germany. Prices were in the region of £130 - £140 per calf.

The recent history of the management of bobby calves in the UK is tied to the management of BSE. On 26 March 1996, the British government announced that there was a link between BSE in cattle and new variant CJD, after that date export of live calves was banned. The market developed for dairy bull calves disappeared over night.

Prior to this the export of live calves was a major political issue with large demonstrations. The British public did not want calves leaving for white veal production in Europe when the UK had banned veal production in crates in 1990. The impact of the campaign was minimal in terms of the number of calves exported, but had a major impact on the resources of the State Veterinary Service policing the trade. Subsequently the ban on the export of live calves had nothing to do with welfare, but was purely a response to CJD.

The UK requires that calves be more than seven days old before transportation ( "which is actually when the navel is dry as there is no other way to clarify the age of the calf other than the condition of the umbilicus"). Calves cannot be resold within a specified time frame.

Permanent cattle identification is compulsory in the EU. The British Cattle Movement Registry administer the permanent identification and pass ports for all cattle in the UK backed by a computer data base with records of sire and dam, date of birth and records of disposal. Calves must be tagged within 36 hours of birth. Applications for cattle passports must be made within 28 days of the animal being tagged. However a special calf passport allows for up to two movements to be made, including to slaughter, up to the age of 28 days if a full passport has not been applied for.

The Calf Processing Aids Scheme (CPAS) was introduced following the CJD ban on the export of calves to assist the dairy industry to adjust to reduced outlets for its surplus calves. It provided a floor price in the market for bull calves slaughtered before 20 days of age, but the meat produced was not allowed in the food chain. Essentially this scheme paid the abattoirs a flat rate of £105 for all dairy bull calves. Through 1996 and 1997 and particularly 1998, the number of calves going into that scheme grew to 700,000 per annum, greater than the number that live exports used to account for. CPAS began to affect prime cattle slaughter availability.

There was no incentive to use some beef breeds in the dairy sector, dairy farmers used Holstein bulls , reaped the benefit of improved genetics in the dairy sector and disposed of Holstein bull calves through CPAS.

CPAS was meant to be a short term emergency measure, however it became an enduring feature of both the dairy and beef industry economics. At first only dairy breeds were eligible, but the scheme

was extended to beef breed calves from December 1996. CPAS was to end on 31 March 1999, but was extended to 31 July 1999. Approximately 2,000,000 calves were removed from production in the UK under CPAS. Of these 90 per cent were dairy breed (black and white) bull calves.

The end of CPAS saw a spate of political activity by farmers, which involved dumping calves in Westminster, in telephone boxes around the country at RSPCA shelters etc. Holstein bull calves were worth “next to nothing” - £8 –10 per calf, (there was also depression in the dairy industry which has continued with many small and medium sized producers exiting the industry).

Immediately after the end of CPAS it became a viable option to pay a knacker £3 -5 per head to dispose of surplus calves. Surplus calves were generally disposed of to hunt kennels or knackeries before they were 36 hours old to avoid the registration costs with the British Cattle Movement Registry. It appears that the seven-day rule for transportation is not enforced for calves moving to hunt clubs or knackeries for disposal. Bigger dairy units in the UK continued to use Holstein bulls and accept bull calves as a by-product and a disposal problem. They hope that in the future the availability of sexed semen the surplus calf issue may change. Some UK dairy farmers adjusted to the withdrawal of CPAS with many farmers using some beef breed bulls to produce a calf that was more valuable.

The situation with surplus dairy calves varies in different parts of the country, where there is a demand for calves to rear as beef, there is no problem of disposal

At the conclusion of the CPAS producers were presented with the choice of:

- rearing the calves to beef weight
- selling as rearing calves (including some bull beef)
- slaughtering as bobby calves
- disposal at knackeries or hunt kennels

There are only a few specialist bobby calf slaughterers, most calves slaughtered as bobby calves (between 1-3 weeks of age) are sourced either through calf groups, by livestock agents or from auction markets. While CPAS existed only the poorest quality heifer calves were slaughtered and recorded in bobby calf slaughtering figures, they dwindled to about 20,000 calves per year. The bobby calf industry has increased since CPAS and officially 75,000 bobby calves were slaughtered in 1999.

There is a small specialist veal industry in the UK rearing about 4,000 calves annually. UK veal is like rosa veal, calves are essentially fed a milk diet however they must be group reared, have access to roughage and be bedded (no slats).

Traditionally calves sold through the auction market system are about two weeks old at the point of sale. Calves from bigger dairies are usually purchased on farm by calf buyers who work for marketing groups. Calves are batched onto rearers. Often the marketing groups themselves will have dedicated rearers to take them from two weeks to three months old and sell them on as reared calves to specialist finishers.

The use of electric goads is prohibited in the UK, only allowed to use goads on adult animals.

### **Bobby calf management – some future strategies**

Sue Hides  
Senior Veterinary Officer, Gippsland  
PO Box 335  
Maffra 3860

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There is a need to put more effort into auditing to define current performance of the bobby calf industry against the code of practice. Encourage government and welfare groups to form partnerships with industry to improve compliance with agreed standards and improve standards where necessary. Continue with education, build code requirements into quality assurance programs where possible – encourage industry self-regulation. Be prepared to accept that in some areas industry will fail to self

regulate and decide when it is appropriate to develop legislation. Ensure any legislation is enforced and enforceable. Seek incremental improvements.

Support industry in seeking opportunities to value add, for example dairy bull beef production, removes bobby calves from slaughter and will ease the pressure on abattoirs at peak calving times.

#### Animal Welfare Centre Dairy Industry Audit – John Barnett

The aim of the audit is to collate existing welfare information with additional data from the literature and from experts into one document to provide a comprehensive welfare audit of the dairy industry.

The purpose of the audit documentation is three-fold

4. To provide documented evidence of the quality of animal care
5. To identify and monitor issues associated with the quality of animal care
6. Identify and monitor human resource and behaviour issues associated with quality care.

Several countries have codes of practice for welfare and there are audits associated with marketing of “welfare-friendly” systems, for example, Freedom Foods in the UK.

Documentation for the Dairy industry Audit will be prepared by a Management Group comprising representatives of farmer groups, animal welfare groups, teaching and research organisations, commercial companies and those with a legislative interest. The management group will have a high degree of ownership of the project.

The code of practice is examined against industry practices and questions are determined. There are two types of questions:

3. Critical questions, those which must be complied with to pass an audit
4. Good practice questions, those which reflect the current state of knowledge and its practical implementation in the industry. The purpose of these questions is educational and to provide an indication of changed practices for the future.

The dairy industry audit will be developed in stages. The audit of bobby calf management will be the first stage, with the expectation that the first draft of the bobby calf component of the Dairy Industry Audit will be prepared by December 2001.

#### NRE Survey data

Southern dairy regions of Victoria have a five per cent demonstrated non-compliance with calf selection codes (mostly wet strings) 15 per cent non compliance has been recorded in previous cold wet seasons. Northern dairying regions of Victoria have a much lower demonstrated non-compliance with calf selection codes – less than one per cent non-compliance rate.

Some attempts have been made to collect survey data on transportation times and distances and time between farm gate and slaughter. A well structured and organised national survey is needed.

#### Bobby calf declaration

*Monitor effectiveness in Victoria / Extend use to other states  
Gazette under the Stock Seller Liability and Declarations Act*

A joint industry and government meeting was held in January 2000 to discuss compliance with the bobby calf provisions of the Code of Accepted Farming Practice for the Welfare of Cattle. The meeting agreed to establish a working party to develop a Vendor Declaration (Bobby Calves). The declaration was to ensure recognition that calves met the minimum standards when they left the farm.

The Victorian bobby calf industry, led by processors through the National Meat Association of Australia and supported by the Department of Natural Resources and Environment, Australian Meat Council, AQIS, Livestock Transporters Association of Victoria, the Victorian Stock and Station Agents Association and the United Dairy Farmers of Victoria signed-off on the Bobby Calf Declaration. It is currently being distributed to all Victorian dairy farmers, for use this calving season.

The declaration made by the vendor (farmer) is counter signed by the person taking delivery of the calves – the calf buyer, transporter or saleyard agent.

Currently any false or misleading statements made in a completed Bobby Calf Declaration may attract civil action by the purchaser. The declaration is not yet gazetted under the Stock Seller Liability and Declarations Act.

Calf buyers are generally enthusiastic about the declaration. The declaration provides a perfect excuse for them to reject calves that do not meet code requirements on the basis that they are protecting the dairy farmers best interests, without fear of losing farming clients to less scrupulous buyers.

#### Calf buyer / handler / transporter / accreditation

##### *Develop a package that could be used to train or retrain calf handlers*

Calf buyers need to comply with the Code of Practice, they must be aware of requirements for selection, handling, holding and transportation. A training package is required that provides this information and information on calf behaviour and physiology and the impact of management on ease of handling, mortality and dressing percentage etc. Often calf handling technique is learnt on the job, many inappropriate handling techniques need to be removed from the repertoire of some calf handlers.

Farmers and others who manage livestock must also understand that animal welfare standards have the potential to impact on world trade.

Euthanasia guidelines for bobby calves for farmers, calf buyers / transporters and abattoirs

##### *National guidelines specifically for calves*

#### Legislation

*Reference parts of the code in legislation*

*Enforceable penalty for the use of goads on calves*

Some consideration might be given to referencing some of the bobby calf provisions of the Code of Accepted Farming Practice for the Welfare of Cattle in legislation. Cage size for hens is now legislated and a breach of the Victorian Code of Practice for the Care and Use of Animals Used for Scientific Purposes is grounds for prosecution under part 3 of the POCTAA without the need to prove cruelty.

Electric goads are routinely used on bobby calves contrary to the code. Calf handlers make no effort to disguise their use from NRE audit teams. Ban the use of goads and provide an enforceable penalty for their use. Industry has definitely failed to self regulate in this area.

Power of entry to audit - specialist inspectors under Prevention of Cruelty to Animals Act – Victoria have power of entry to undertake audits.

#### Transportation

##### *Work required to specify calf transport vehicles of the future*

*Loading densities need to be determined and written into the code.*

*Survey to determine current transit times and distances*

*Regulate transport times and distances (across state lines)???*

*Education for calf transporters*

Time in transit and distances travelled can be excessive, calves are not necessarily slaughtered at the closest abattoir – this may well be the major issue affecting bobby calf welfare post farm gate.

Bobby calves are transported in vehicles designed for other classes of stock, there are major deficiencies in their design for both long and short distance transportation of calves. Top decks are uncovered causing problems in cold wet weather, calves frequently fall from the top deck while in transit, bottom decks receive effluent from the decks above. Calves get wet when they lie down.

Loading densities during transportation have not been specified in the code. The loading density should allow calves to lie down while being transported. Bedding is provided in most other developed countries.

#### Processors / procurers

##### *Audit calf management at abattoirs re distance travelled, arrival and slaughter times*

Carcass yields and mortality are influenced by a number of off-farm factors including handling time, time off feed transit time and conditions. To ensure acceptable bobby calf welfare standards abattoir operators must:

- Incorporate the code, particularly the section relating to abattoirs and those sections on selection, handling and holding of calves into existing QA systems and observe these requirements
- Aim to achieve the shortest possible time from arrival to slaughter – delayed slaughter is common during the peak calving months
- Ensure that facilities such as unloading ramps, holding pens and feeding facilities are provided and maintained in a condition that ensures the code is complied with (often the gradient of the unloading ramp is too steep)
- Cooperate with auditing teams
- Undertake ante-mortem inspections and only accept calves that meet the required standards
- Ensure a system is in place for the prompt identification and humane euthanasia of sick, injured or weak calves

Areas requiring more investigation - provision of water and feeding following delayed slaughter.

Processors have supported the bobby calf declaration to ensure that calves meet minimum standards at the farm gate. Processors now need to be made accountable for their management of calves at abattoirs and in transit to abattoirs. Processors who are contract killing calves for a third party have less incentive to improve calf management at the works.

#### Holding facilities

##### *Need code compliance and penalty for not compliance*

Calves are often held in open yards with no bedding – they quickly become cold wet and dirty in poor weather. Standards for holding facilities are described in the code.