THE WINSTON CHURCHILL MEMORIAL TRUST OF AUSTRALIA

Report by

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2010 Churchill Fellow

The Jack Green Churchill Fellowship

Identifying opportunities to support Australian cattle exports to cold winter climates

Dr Sean Miller
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1 INTRODUCTION

As a consultant in the southern Australian livestock industries, I've had an interest in beef and dairy cattle exports to cold-climate destinations, such as Russia, since an earlier involvement in business planning for companies entering that industry.

In working with Russian companies over the past three years, it became quickly obvious that their traditional beef farming system of housing cattle indoors during winter would be a costly and unprofitable management strategy in the long term as their industry matures and Russian beef pricing is linked to international prices. Consequently, the industry needs to adopt cold winter management strategies early, such as those practiced by Canadian beef producers involving cattle grazed outdoors throughout winter.

With little experience currently available in Australia to support these aspects of cattle management, the opportunity provided by the Winston Churchill Memorial Trust to travel to Canada to investigate these management strategies will be invaluable to support Australia's continued involvement in exporting cattle (beef and dairy) to Russia and now central Asia (e.g. Kazakhstan).

The purpose of my six weeks in Canada and northern USA was therefore explicitly aimed at learning how beef and dairy producers in the northern hemisphere prepare and manage cattle and forage resources under extremely cold winter temperatures (to -40^{o}C for example), and how our Australian industry can benefit by better understanding the challenges faced by Russian producers buying Australian cattle.

Acknowledgements

This study would not have been possible without the extraordinary generosity of the sponsorship provided by the Jack Green Memorial Fellowship, and the Winston Churchill Memorial Trust. I am indebted to their collective commitment to the Australian community through the provision of this and other similar Fellowships each year.

I am eternally grateful to the support provide to me by my wife in allowing me to indulge myself in this activity for 5 weeks without her and our children – left at home to look after themselves, school, child care, her work, and a farm as well. We took the chance to reunite in Canada for the last week of travel (and a post-trip holiday), and I'd advise anyone undertaking a similar venture with a young family to do the same … for everyone's sake!

A great many people contributed to make my journey to Canada and the USA successful, and I wholeheartedly thank them all for their invaluable assistance. None the least, all those individuals who generously donated their time and friendship to accommodate my curiosity, and to allow me to visit their farms, offices, laboratories, sheds, paddocks, and homes to question why and what they do.

Rural Solutions SA invested some time for this Fellowship as a component of an ongoing commitment towards professional development, and I am fortunate that the flexibility that my employer provides in this approach has enabled me to make full use of the opportunities that Churchill Fellowships provide.

2 EXECUTIVE SUMMARY

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The Jack Green Churchill Fellowship to identify opportunities to support Australian cattle exports to cold climates - Canada, USA

Highlights

- Observing obviously happy beef cattle being managed outdoors in -40^{o}C temperatures!
- Whilst it is unfair to single out any particular visit or site, the Western Beef Development Centre at Lanigan, Saskatchewan was (and is) an outstanding example of producer driven research and development. Run under the limitations experienced by commercial production systems, the facility and staff at Lanigan have had, and will continue to have a significant influence on the practical development of the Canadian beef industry
- Meeting beef and dairy producers across Canada and northern USA was a particular highlight, as their first hand experience, enthusiasm and commitment to their individual enterprises and the industry as a whole was inspiring
- The value of an experience such as a Churchill Fellowship is often much greater than the initial scope of the idea behind the travel. In this instance, the additional information that was derived from my meetings was often wider in range, and at least as great in value as the primary purpose of the travel. The challenge will be to capture, develop and apply these peripheral benefits (for example participating in the Montana Shearing School on a weekend in-between other meetings)

Communicating the Lessons

Since returning from the travel in April 2011, a great deal of agri-media interest has been generated across southern Australia that has resulted in articles and stories in the following; WA Countryman (Western Australia), Stock Journal (South Australia), Weekly Times (Victoria), The Border Watch (Mt Gambier, South Australia), ABC Rural Radio (South Australia), Win TV (South East South Australia), and the Tri-State Livestock News (Montana, USA).

Over the coming months I anticipate a wide range of speaking engagements in South Australia, in particular, including farmer groups, consultants and industry organisations, and commercial exporters. A number of these have already been conducted, and other engagements are confirmed or in planning. In addition, whilst in Canada and the USA, I delivered 5 seminars to more than 100 agricultural professionals distributed across 4 Canadian provinces and 3 US states.

During the travel itself I took the opportunity to create a 'travel blog', and it remains accessible at http://www.jackgreenchurchill.blogspot.com/

3 PROGRAM

14th to 20th February

Dairy and Swine Research and Development Centre, Sherbrooke, Quebec

Holstein Canada, Brantford, Ontario

Loewith's Dairy, Ontario

21st to 27th February

Great Plains Research Laboratory, Mandan, North Dakota

Henry Meyer, Bismarck, North Dakota

Ken Miller, Bismarck, North Dakota

28th February to 6th March

Brandon Research Centre, Brandon, Manitoba

Douglas Bull Test Station, Brandon, Manitoba

University of Saskatchewan, Saskatoon, Saskatchewan

Western Beef Development Centre, Lanigan, Saskatchewan

7th March to 13th March

Lacombe Research Centre, Lacombe, Alberta

Western Feedlots, High River, Alberta

Economics Workshop for Cow/Calf Producers, Claresholm, Alberta

Deseret Ranches, Raymond, Alberta

Lethbridge Research Centre, Lethbridge, Alberta

14th March to 20th March

Red Bluff Research Station, Montana

Montana, State University, Bozeman, Montana

Stephenson Angus, Hobson, Montana

21st March to 27th March

Dairy Forage Research Centre, Madison, Wisconsin

University of Wisconsin, Madison, Wisconsin

Refer Appendix 2 for key contacts

4 AUSTRALIAN CATTLE IN COLD CLIMATES

4.1 Live Cattle Exports to Russia

Australian beef and dairy heifers and bulls are currently being sought for export to Russia and central Asia as high quality breeding animals. These countries are currently implementing food security policies centred on developing world standard dairy and beef industries.

This demand has emerged since 2006, and up to 80,000 breeding cattle have been exported to Russia during this period. Exports exceeded 20,000 live breeding cattle from Australia to Russia in 2008, and over the whole period have been received in destinations across the breadth of the country (Appendix 1).

This trade has been evenly divided between dairy heifers (Holstein Friesian breed) and beef heifers and bulls (Angus, Hereford, and a small number of Simmental and Limousine breeds).

Despite the recent volume of cattle exported to Russia, these buyers remain hesitant to purchase Australian cattle as they believe that cattle from our apparent 'hot' Australian climate will not adapt and survive the cold Eastern Europe and central Asian winters.

4.2 Adaptability of Australian Cattle to Cold Winter Climates

It is important to note that despite the Russian perception, there is no physiological basis to support this concern. To date, and in the future, breeding cattle exported to Russia have and will be sourced from southern Australia. The vast majority of beef cattle for this market belong to the British breeds of (Aberdeen) Angus and Hereford.

For the great majority of the calendar year, the normal diurnal range of air temperatures at the Russian destinations are identical to those in southern Australia from where cattle are selected. Consequently, for the majority of the year, i.e. during spring, summer and autumn, Australian cattle are highly adapted to the northern hemisphere climate.

The obvious difference between our two climates arises during winter when average northern hemisphere winter temperatures decline to steeply negative temperatures for up to 3 months, and with periodic drops to -20^{o}C to -40^{o}C; and with snow. By comparison, average minimum winter temperatures in southern Australia tend to be closer to 0^{o}C to 5^{o}C, with periodic declines to -5^{o}C; and without snow.

It is this apparent difference that currently concerns potential purchasers of Australian cattle in Russia and north Asia.

4.3 Physiological Basis for Adaptation to Cold

International research demonstrates that the primary physical attributes of the Hereford and Angus breeds that enable them to adapt well to cold weather conditions include the skin (hide) thickness, and an ability to grow dense hair coats in response to the onset of cold weather. Put simply, when the weather turns cold, Hereford and Angus cattle grow dense winter coats to compensate.

This adaptive response is an inherent characteristic that these breeds' possess, and it is expressed in response to cold air temperatures, irrespective of the conditions in which the cattle are bred.

For example, research conducted in Canada has shown that cattle raised outdoors in winter have twice the density of total hair cover in their insulating coats than cattle raised in sheds at the same site.

The principal difference between winter and summer hair coats is that the winter insulating coat has longer and fewer medullated hairs relative to the non-insulating summer coat. Medullated hairs are shorter and stiffer than non-medullated hairs, and medullated hairs aid in heat dissipation during summer. Consequently, Angus and Hereford cattle adapt to both cold winter temperatures and hot summer temperatures through seasonal changes in the density and composition of the hair coat.

4.4 Recent History of Australian Cattle in Cold Climates

Australian Angus and Hereford cattle have previously been, and continue to be exported to a range of cold climate countries with high success rates. These include Russia, China, north Asia, Canada and northern USA, and also recently the sub-Antarctic territories of the Falkland Islands.

Similar winter conditions are observed in the Falkland Islands to those in many Russian and north Asian territories, with average minimum winter air temperatures of -1^{o}C to 0^{o}C Celsius, and with an average winter wind chill factor of -10^{o}C; accompanied by snow fall. Under these conditions, Australian Angus cattle have remained highly productive and serve as the National Stud Herd to improve the genetic merit of the Falkland's beef industry.

Based on the genetic disposition of Angus and Hereford cattle, together with the recent successful history of shipments to cold climates of Australian-bred Angus and Herefords that have been sourced from the southern cold temperate regions of Australia, there appear to be no apparent physiological reasons for concern for their survival when shipped to cold winter climates in the northern hemisphere.

4.5 So Why the Concern?

Since the collapse of the Soviet Union in the 1980's, the collective farms have struggled to survive, and much of the farmland has been 'abandoned' due to a lack of access to physical inputs and finance.

The economic conditions in Russia and central Asia are currently highly geared to rapid development of the agricultural industries as a matter of national food security, and Government backed investment subsidies are now widely available for companies to invest in developing enterprises on these vastly underutilised land resources.

Many of these 'agricultural investors' are new to agriculture, and their animal and farm management skills are generally lacking. Consequently, there is some concern that for the livestock industries in particular, the inexperience of these new players may mean that they may not be sufficiently prepared to manage imported animals adequately to ensure that they survive and prosper in their new environment. When coupled with a lack of understanding of the natural adaptive response of British breeds to cold winters, buyers consequently make the assumption that Australia is not a suitable source of cattle.

4.6 Fellowship Objectives

The leading experience in cold weather management of cattle currently lies in Canada and northern USA. To provide confidence for the Australian beef and dairy industries who are

currently supplying cattle for export to Russia and central Asia, the Jack Green Churchill Fellowship therefore supported this project to discover how producers in Canada and the northern states of the USA manage cattle in very cold winter conditions.

By developing an understanding of the management practices that are used to farm cattle productively and profitably in cold weather, it is possible to develop recommendations for Australian farmers to assist them to prepare cattle that will remain fit and productive when they are exported to Russia and Asia.

Specific objectives were therefore to observe and understand management practices to;

- select and breed cattle that are suitably adapted to (and profitable in) cold winter climates
- maintain the welfare and productivity of beef cattle farmed outdoors, and dairy cattle farmed in enclosed free-stall barns during winter
- select and cultivate appropriate forages for low-cost winter feeding systems, and
- maintain a low cost of production

5 BEEF CATTLE

5.1 The 'Northern Cold-Winter' Beef System

The Canadian and Northern USA beef cattle industry is characterised by three distinct sectors;

- Cow-calf (breeding)
- Backgrounding
- Feed lotting

Although a proportion of the industry is engaged in two or three components of the industry, the majority of 'farmers' are focussed on the cow-calf enterprise. The feedlotting industry typically has investment in both backgrounding and feed lotting concurrently.

Cow-calf

The typical Canadian cow-calf enterprise aims to produce weaner cattle for sale directly to backgrounding operations or feedlots. Until recently, calves have typically been born in February/March. However, the impact of high input costs and low beef prices in the last decade have resulted in a management change that is now seeing producers delay calving to April and May.

The high cost of feeding late pregnant and early lactating cows in the last months of winter is the key driver for change. With cows calving in mid-spring, the period of highest feed demand by the breeding cow can be better aligned to pasture supply, as pasture growth increases dramatically with the warming effect of spring.

Producers choose to sell weaners either at the start of winter, or to retain them during winter and 'background' them until the following spring, whereupon they are sold directly to feedlots for finishing. A primary factor in deciding whether to sell before winter or retain them until spring is the availability and cost of feed required to maintain the weaners on a moderate growth path during winter. Using forward pricing (futures and basis) mechanisms for backgrounded cattle to be sold in the following spring, producers are able to make early cost:benefit decisions on the alternate strategies.

Cow-calf enterprises predominantly breed their own replacement heifers and aim to mate them at 13 months of age for first calving by 24 months.

Investment in cows to produce calves is the highest cost for the cow-calf enterprise. Reducing these costs is therefore a key objective. Ultimately, a cow is targeted to produce 50% of her own bodyweight (as calf) each year.

Backgrounding

The conundrum for many producers is whether to retain weaners over winter and to invest in feeding them to achieve an ideal weight and condition for eventual sale to feedlotters and achieve a satisfactory economic return. The current system sees farmers

adopt a compromise between maximising growth rates of weaners over winter, and minimising feeding costs. Consequently, growth rates are more typically targeted at around 0.6 to 0.8kg/head day (1.3 to 1.8 pounds) which is about 40% to 50% of potential growth rates of these animals on high quality diets. A liveweight target of about 500 to 600 pounds (225 to 270 kg) is desirable for subsequent direct sale to feedlots. The relatively modest growth rates that are targeted during the backgrounding phase are offset by compensatory growth in the feedlot.

Feedlotting

The Canadian and northern USA beef industries are dominated by professional feedlotters. Grain-fed beef characterises the finished product from both countries, and contrasts directly with the high proportion of grass-fed finished beef in Australia. There are little commercially available quantities of grass-finished beef in Canada.

Feedlots operate all year round and manage their inventory (in and out) to accommodate both the limitations of seasonal supply, and abattoir (and market) demand.

The staple grain component of feedlot diets has, until recently, been corn. With the implementation of policies to support the production of bioethanol across North America, much of the corn previously used for livestock feed is now diverted to subsidised ethanol production. Consequently, the livestock industries now source cheaper grains and grain substitutes, including barley (also used widely for ethanol), and dried distillers grains.

5.2 The Importance of 'Management'

> *'In Russia it doesn't matter what country the cattle come from; how they are managed when they get there is what determines whether they survive and do well'. (Darrell Stevenson – owner of Stevenson Angus (Montana, USA) & Stevenson-Sputnik Ranch (Voronezh, Russia)).*

More than anything else, this comment succinctly summarises the real take-home message from the time that I spent in Canada and the northern states of the USA.

In professional agriculture we use the term *management* very broadly to describe the influence that people have on the performance of farm businesses. It is a 'catch-all' label that varies infinitely from enterprise to enterprise, it is an amalgam of decisions and decision making processes, it is subject to constant change, and it is incredibly difficult to measure quantitatively.

Nevertheless, the decisions and processes that are enacted in response to daily, seasonal and annual changes in the climate, soils, pastures, animals, people, and finances ultimately determine farm success or failure.

For countries such as Russia where agriculture is in a phase of rapid development that is driven by national policy objectives and substantial financial support to achieve those objectives in short time frames, the development of adequate farm management

skills to capitalise on the Government-funded support mechanisms is essential. For cattle enterprises, this requirement is further underscored by the animal welfare responsibilities that are implied by farming livestock.

The following points highlight the key North American management strategies that contribute to make beef cattle farming in these cold winter climates successful over the long-term. Adoption of these managements in Russia will ultimately determine the success of their current investments in redeveloping their cattle industries.

5.2.1 Mating and Calving Strategies

- Mating in summer (July/August) to calve in spring (April/May) matches peak animal demand with peak pasture quality and quantity for a cow-calf enterprise
- Heifers may be joined 4 to 6 weeks earlier than the mature herd to enable first calvers to be monitored and managed separately and accommodate any difficulties with the first parturition
- Calves born to mature cows are born outside and moved to a calving barn for 24 to 48 hours to allow the pair to bond and for the calf to benefit from colostrum in the first milk, and to allow the calf's hair coat to dry fully and acquire full insulating properties before being returned outdoors
- Managing calving cows outdoors reduces animal health issues in the herd, since the cold temperatures restrict microbial activity
- Stud farms join and calve up to 3 months earlier to enable young bulls to be used at 15 to 18 months of age – increases the return on investment in bulls by reducing feed costs and reducing the generation interval

5.2.2 Water Supply During Winter

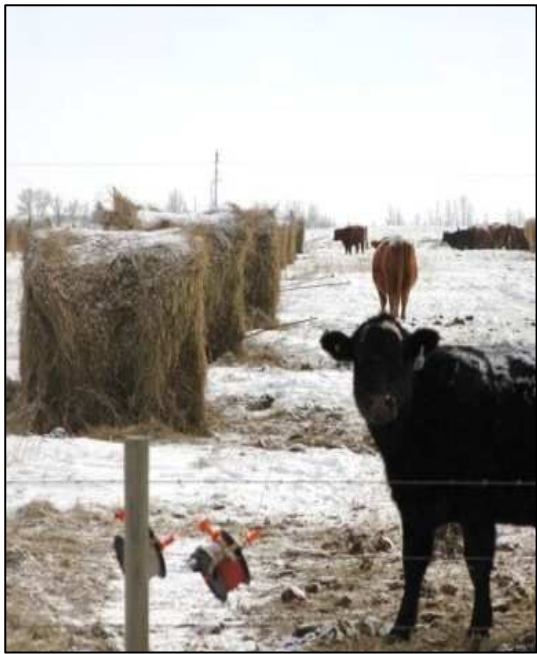
- Snow …
    - may be used as a primary water source through winter
    - consumption as a source of water is a learned activity
    - is not suitable for lactating cows due to the high water demand associated with lactation – provide an alternative source such as frost-free watering mechanisms
- Icy snow can be problematic as it is more difficult to consume
- Cattle breaking through ice in streams and dams is a significant risk and these water sources need to be managed to reduce risk, particularly during early winter and spring when the ice is at its thinnest
- A range of 'frost-free' watering mechanisms work successfully at temperatures to at least -40^{o}C

5.2.3 Winter Feeding (Grazing) Strategies

- Confined feeding using prepared rations has become cost-prohibitive for most cow-calf enterprises due the high cost of grain, machinery, labour and yarding (construction, maintenance, management and depreciation)
- Industry has moved to lower cost alternatives based on grazing outdoors throughout winter
- Swathed (windrowed) cereals (for example triticale, barley and oats) that are sown early in summer (June) and swathed at soft-dough stage provide high quality (and quantity) forage that may either be;
    - Used in summer to take pressure of pasture that can then be stockpiled for grazing in autumn or winter, or
    - Conserved until winter, with swaths lying on the stubble and preserved under the snow. Swaths are then fed out using strip grazing methods to limit daily supply and maximise utilisation
- Stockpiled pasture (the standing haystack) – accumulated pasture growth reserved for delayed feeding in winter. Cattle easily graze through at least 18 inches (0.5m) of snow
- Bale grazing – within a confined area, bales are aligned in rows and fed out under controlled conditions (with the aid of stand-off electric fences) to maximise utilisation. Confinement also benefits energy balance in the cows by reducing energy used for walking
- Where rations are fed to selected animals (including in feedlots and backgrounding), energy component of the ration is balanced for a -20^{o}C ambient temperature

5.2.4 Production Efficiency

- The investment in winter feeding for the breeding cow is the primary cost for cow-calf enterprises. Thus, minimising feed costs is a key profit driver
- Feed consumption is well correlated with bodyweight, consequently smaller cows generally[1] consume less feed and therefore cost less to maintain. Producers are therefore aiming to breed and retain cows with mature bodyweights closer to the historic range of 1,200 to 1,400 pounds (540 to 630 kg). Cows have tended to become larger in recent years, and are often in the range 1,500 to 1,700 pounds (680 kg to 770kg)
- The Western Beef Development Centre (Saskatchewan) is examining strategies to reduce winter feed costs by feeding replacement heifers to 55% or 65% of mature bodyweight at first mating to test the efficiency of the system
- Cow-calf enterprises aim to turn off 50% of the cow's bodyweight as weaned calf per year



[1] This is a general relationship, and although it holds true for populations, it is a naturally variable entity between animals of similar weights

5.2.5 Winter Management

- Planning around yards and facilities needs to take into account areas to stockpile snow that is taken off roadways and around sheds and yards to enable all-winter access
- Stockpiled hay and silage needs to be vermin proof (e.g. deer and elk in Canada/USA)
- As a contingency to reduce the risk of loss of haystacks from fire, multiple storage sites should be established
- Undercover cattle handling facilities are essential for human (operator) comfort
- Bedding is a critical requirement for all cattle in winter. In yards, provision of straw (generally processed by a mechanical bale processor) throughout winter meets this objective
- Wind protection is an essential element in outdoors grazing situations. Wind protection can be provided by;
    - Trees (individual, groves and shelter belts)
    - Bales of hay – particularly in bale grazing situations
    - Timber wind fences (portable or fixed) – up to 3 metres high, 20% porosity; achieved by spacing boards vertically, and separated by 0.25 of the width of each board (for example, 4 inch wide boards spaced 1 inch apart)
- Manage nutrition during extreme cold events – for cattle on high energy diets, grain component in the ration is reduced and substituted with hay to increase internal 'heat of digestion' associated with higher fibre diets
- Frostbite is an ever present threat - ears, udders, feet, scrotum. Managed by adequate energy density in feed, keeping cattle dry, regular provision/replacement of bedding straw
- It is critical to avoid cattle becoming wet (through the hair coat to the skin), as the subsequent risk of freezing temperatures can caused the water on the hide to freeze and fatally compromise thermal regulation by the animals
- Sunburn (reflection from snow) may occur in some breeds – e.g. risk in Herefords is managed through selection of cows with suitable pigmentation on udders, and pigment around the eyes (e.g. achieved through cross-breeding with Shorthorns)



6 DAIRY CATTLE

The Northern USA and Canadian dairy industry is characterised by 'housed' cattle fed total mixed rations year-round. This contrasts with the Australian industry which by and large relies on pasture-based feeding systems to support year-round milk production. It also contrasts with the current Russian practice of pasture-fed milk production during summer and autumn (16th May to 14th October), and prepared rations fed to housed cattle during winter and spring (15th October to 15th May).

As a consequence of their 'indoor' environment in Canada, the vast majority of the potential impacts conferred by cold winter temperatures on animal production and survival are avoided.

6.1 'Cold-Winter' Management Strategies

- Enclosed free-stall barns capture the radiant heat produced by the cattle throughout the winter, and effectively warm the shed to comfortable ambient temperatures
- Ventilation systems installed in the barn are used to actively moderate the internal environmental conditions (temperature and humidity) and to maintain a comfortable and healthy environment year-round – high humidity is the greatest risk to herd health
- Replacement heifer calves are reared outdoors in individual (low cost) shelters until three to four months of age
- 'Weaned' heifers are managed in groups in 'housed' conditions until they enter the milking herd; receiving total mixed rations throughout
- Heifers are mated at 13 months of age with a target to bear a calf by 24/25 months
- Focus on producing high quality forage (maize) and grain (corn) during the short spring and summer forage production season due to the year-round reliance on total mixed rations
- Barn effluent is managed by continuously moving, cable operated mechanical scrapers (or bob cats etc.), and with the accumulated solids conveyed and stockpiled outside during winter. Stockpiles are composted and distributed on forage growing areas during spring as a supplement to bought-in fertiliser, and is governed by nutrient management plans
- Dairy wash is accumulated in storage ponds during winter, and spread to land via irrigation



7 CONCLUSIONS

For the beef industry …

- Feed efficiency is a key profit driver for the Canadian and northern USA beef industries, and cattle that achieve this requirement should be targeted for the Russian export market. At present, feed efficiency is represented by mature bodyweight, and an optimum is in the range 540kg to 630kg (1,200 to 1,400 pounds)
- Management of cattle to keep them dry and well sheltered are key open-range grazing objectives
- Bedding is critical for pen-based feeding systems
- Water supply and management must be well considered in respect of the age and physiological status of the cattle (for example young animals learning to use snow as a water source, and pre-calving cows with high water requirements)
- Winter grazing systems are key profit drivers. These systems minimise investment in yarding, machinery and labour
- Winter pasture and forage based grazing systems can be used effectively for much of winter, with snow depths up to 0.5m for swathed (windrowed) cereals and standing pastures, and up to 1m+ for bale grazing confinement areas
- Winter grazing systems must aim to maximise feed utilization to obtain the best return on the investment to produce either conserved forage (in swaths or bales), or delay pasture grazing to allow it to be stockpiled for grazing in winter

For the dairy industry …

- Free-stall barn investments that are occurring in Russia will ensure the success of Australian dairy cattle upon arrival
- Russia requires improved dairy herd (nutrition, health and reproduction) management skills t capitalise upon the production gains that are represented by Australian genetics

For both industries …

- Management skills in all aspects of cattle farming are the key determinants of business success (animal, land, financial and people). Australian cattle producers and industry service providers have a significant amount to offer the emerging Russian and central Asian industries
- Australian beef and dairy cattle are undoubtedly capable of adapting to their respective cold winter management systems in Russia (beef vs. dairy), and concern in this regard can be confidently countered by the industry[2]

[2] There is a significant body of evidence now accumulated to quantitatively support claims of high rates of survival and performance of Australian beef and dairy cattle in Russia

8 RECOMMENDATIONS

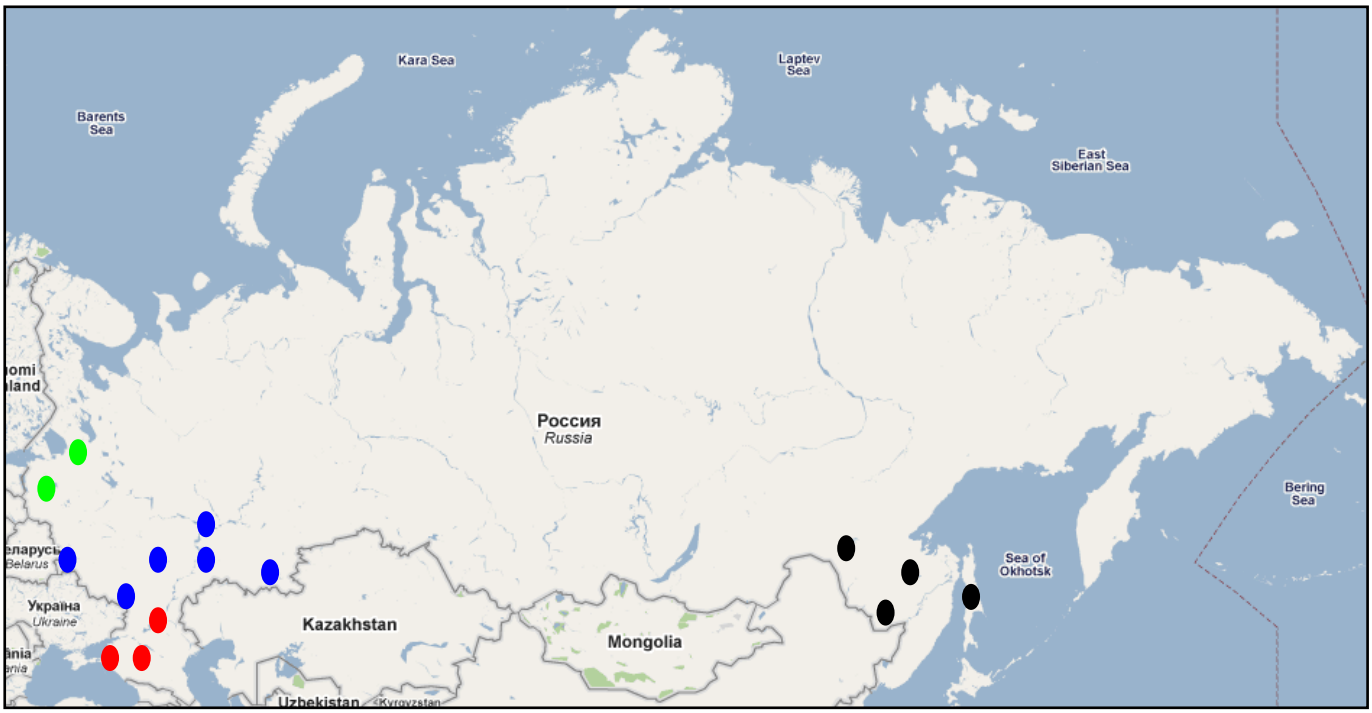
- Australian producers supplying beef heifers into the Russian market should consider the mature bodyweight of the maternal line – 1,220 to 1,400 pound (540 to 630kg) cows represent the ideal 'feed efficient', low cost option for cold climates
- Unmated heifers should ideally arrive in Russia in spring and ready to be mated in order to achieve a first calf in April/May the following year
- Supplying unmated beef heifers in late summer/autumn would not generally recommended, as it will cost Russian producers significant $ in feeding costs to keep these heifers until they are mated in June/July the following year. They would also lose 1 breeding season under these circumstances and therefore reducing maternal efficiency
- By contrast, pregnant heifers could be delivered to Russia in late summer and autumn - calving in March-May
- Dairy heifers destined for entry into modern free-stall barns in Russia will face few winter management concerns since the heat generated by cattle in the barns maintains a comfortable winter environment in the barn
- Australian farmers have an opportunity to convey the importance of good animal management to Russian buyers first hand where cattle are purchased directly on-farm
- Russia are in desperate need of experienced cattle managers – this represents an ideal opportunity for young farmers with some experience, and older producers with more time on their hands (for example transitioning from the farm) to work on these projects in Russia
- Australian exporters should monitor the success of Australian cattle exported to Russia to provide real information that can quantify this success and to provide justification to support further sales

APPENDIX 1

Australian Breeding Cattle Exports to Russia, 2006 to 2010

(Courtesy of ExpoTrade Pty Ltd)

1. Destination of shipments (region)



North West Russia

Veliky Luki

Leningrad

Central Russia

Tatarstan

Bashkiria

Penza

Samara

Voronezh

Bryansk

Southern Russia

Krasnodar

Volgograd

Stavropolj

Far East Russia

Sakhalin Island

Amur

Khabarovsk

Jewish Republic

APPENDIX 2

Primary Contacts

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APPENDIX 2

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APPENDIX 2

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