



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



The Need for Direction: The Canadian Grains Sector at a Crossroads

Hartley Furtan

Adapting to Change: Agriculture and the Rural Economy in the 21st Century
KIS Project (CSALE)

The Need for Direction: The Canadian Grains Sector at a Crossroads



The Need for Direction: The Canadian Grains Sector at a Crossroads

Hartley Furtan

Adapting to Change: Agriculture and the Rural Economy in the 21st Century
KIS (CSALE)





Copyright © Hartley Furtan
Agriculture and the Rural Economy in the 21st Century

All rights reserved. No part of this publication may be reproduced in any form or by any means without the prior written permission of the publisher. In the case of photocopying or other forms of reprographic reproduction, please consult Access Copyright, the Canadian Copyright Licensing Agency, at 1-800-893-5777.

Agriculture and the Rural Economy in the 21st Century
KIS Project (CSALE)
51 Campus Drive
Saskatoon, SK S7N 5A8 Canada
Phone: (306) 966-8419
Fax: (306) 966-8894
Email: kis.project@usask.ca
URL: <http://www.kis.usask.ca>

Contents

Introduction	9
Family Farm versus Corporate Farm	10
A Conjecture	11
A Vision for the Future	13
The Policy Path	13
Family farm policies	14
Industrial farm policies	14
Conclusions	15
References	15





Introduction

Canadian net farm income has been declining over the last 25 years; this reduction, of course, has been associated with considerable year-to-year fluctuations. This long-term decline is in stark contrast to the U.S. situation where net farm income has been increasing over the same time period (see Figure 1). Since 1995, the fall in the net farm income in Canada has been accompanied by an increase in farmers' debt-to-asset ratio, which has constrained their ability to service debt and make investments.

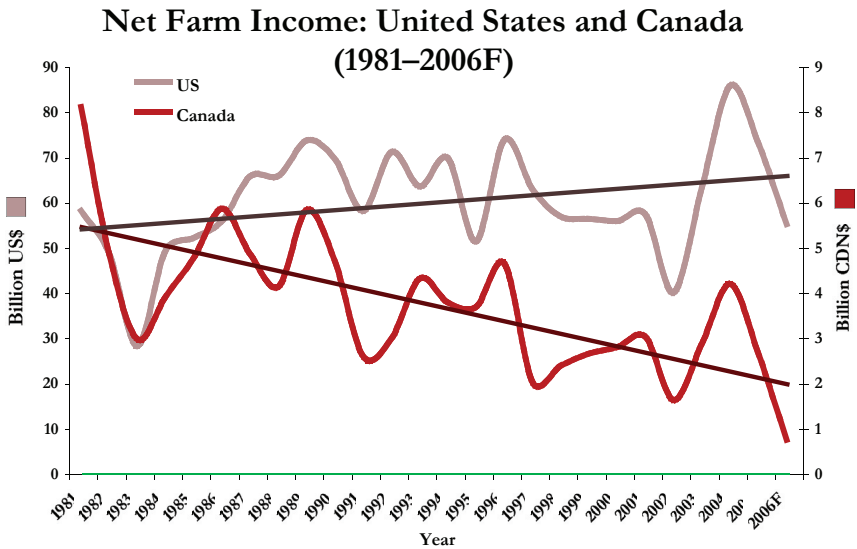


Figure 1. Net Farm Income – Canada and United States, 1981–2006F (constant 2005\$)
Source: Statistics Canada, USDA, forecast (F) by Agriculture and Agri-Food Canada

Until recently, the deteriorating financial picture for Canadian primary agriculture was viewed as being a consequence of farmers' failure to adjust and adapt – i.e., the belief that farmers could solve the income problem by enlarging their operations and by diversifying their product mix. On the Canadian Prairies, such a view was particularly prevalent in the grains sector (in this document the grains sector refers to the sector producing cereals, oilseeds and pulse crops). However, the continued decline in net farm income, even as farmers made adjustments and adaptations, suggests that a more fundamental structural problem exists. More precisely, the long-term fall in income raises the question as to the whether the family farm – which for roughly the last 100 years has occupied a key position in the agricultural industry – is in jeopardy and will be replaced by some other organizational form. The purpose of this paper is to present two potential futures for the grain sector on the Canadian prairies. One of these futures would be based on the family farm, while the other would be based on an industrial model.

Family Farm versus Corporate Farm

The family farm has been described as a virtuous way of life. This traditional view of virtue can be traced back to the ancient Greeks and more recently revived since the time of Thomas Jefferson in the United States. The family farm can be defined as an operation where the family provides the majority of the ownership, labour, management, and risk associated with agricultural production; in return for providing these inputs, the family receives the return that is left over after all expenses have been paid. Family farms thus rely on family members for labour and decision-making. Farmers' retirement income tends to either come from the sale of the farmland or from retaining the land and cash/crop-share renting. The vast majority of grain farms on the prairies can currently be classified as family farms, even those that may be formally organized as a corporation (family farms that are formally organized as corporations should not be viewed as corporate farms – see below).

In an industrial or corporate farm, the operator is engaged in less of the ownership, management, risk and/or reward of the farming operation even though farm operators and their families continue to provide the labour to the agricultural production operation. The poultry sector in the United States, and the hog sector in Canada and the United States, are examples where corporate farming has become prevalent. In the case of broiler production, so-called integrator companies direct the operation of the farm: they own the breeding stock, hatcheries, feed mills, and processing plants.

Growers – who own their own barns – are contracted to raise the broiler chicks to market weight and rely on the integrator for feed, vet services, and production advice. The growers are paid a piece rate per pound of live broiler chicken produced; this rate is determined using a tournament system that compares a grower’s performance relative to other growers that have contracted with the integrator (Knoeber and Thurman, 1994).

If corporate farming were applied to the grains sector, one could imagine farm operators contracting with integrators to produce a set of specified crops on the land that the farm operator owns or rents (a scenario where the integrators provide the land is also a possibility). The contracts would likely specify the inputs (e.g., seed, fertilizer, chemicals, machinery) that would be used (these inputs would be supplied by the integrator) as well as how the output was to be marketed or distributed (it would be expected that the integrator would have the first option to purchase the output). To encourage production performance, the farm operator could be rewarded on the basis of a tournament where the payment received depends on a farmer’s performance (i.e., yield, quality, costs, etc.) relative to other farmers with whom the integrator has contracts. The industrial farm production operation can be expected to be much larger than the family farm operation – while the family farm may average 5,000–6,000 acres, the industrial operation may have 35,000–50,000 acres.

A Conjecture

Does the declining financial performance of primary agriculture – which is currently largely made up of the family farm structure – mean that the family farm will become a thing of the past? Is Canadian agriculture moving towards a situation in which large closed-loop industrial farming will be the dominant structure in the grains sector?

There is considerable evidence that, without any policy changes, the corporate farm will by default become the dominant structure in Canadian agriculture. Lower commodity prices that have resulted from continued increases in production, generated in part by the expansion of agriculture capacity in countries like Brazil, Argentina, and Ukraine and in part by continued subsidization in developed countries such as the United States and Europe, will continue to be a major contributor to lower farm incomes. Farm incomes can also be expected to be lower because of the oligopolistic nature of the conglomerate input suppliers and product processors and the impact that they have on input and output prices.

In an attempt to lower their costs, and survive the cost-price squeeze, farms will continue to expand. Larger size is not enough by itself, however; as has been seen over the last 20–25 years, declines in grain prices and increases in input prices have continued to reduce profit margins even as farms have become larger. To ensure that production continues to come off the prairie land base, the large conglomerates, acting as integrators, will contract production – if needed, the contract terms will ensure that losses in primary production will be offset with profits generated elsewhere in the supply chain.

To be able to compete, farms must adopt the newest technologies. Research and innovation are important parts of the industrialization of agriculture. Innovations that lead to increased productivity are often cost-prohibitive for small farms. Once again, the larger farms are at an advantage. For example, a GPS guided system is a cost-saving innovation that is not affordable to smaller acreage owner-operators. In an integrated system, the integrator will require their contract growers to be equipped with the most advanced technology to ensure the highest production efficiency; to make it economical for the operators to purchase this technology, the integrators may provide advanced tools at a price lower than that at which it would be available to operators that are not part of the integrated system.

Primary production in the grains sector in Canada is at a crossroads; an effort has to be made to redefine and reclaim the family farm or the corporate model will become dominant. Since it will be very difficult and extremely costly to replace the corporate model with the family farm model once this change has occurred, a decision to go with the corporate model is effectively irreversible. This decision is one that Canadian society should make. All citizens, not just farmers, have an interest in the nature of the food production system. Since the majority of the Canadian population resides in urban areas, urban residents – not farmers – are likely to have the final say on the type of agriculture Canada will have in the future.

Whichever direction agriculture takes, there will be differing impacts on the environment, the cost of food, government subsidies, security and safety of the food supply, cultural heritage, and the rural economy. As well, government policy and the research and education system required to support each of the two different types of agriculture would be incompatible. Since the entire structure of the grains sector, as well as the supporting infrastructure (e.g., universities), will be different depending on which vision is chosen, there is need to discuss and debate the two directions.

A Vision for the Future

In terms of environmental stewardship, family farms may be more conducive than the corporate farm for protecting biodiversity, soil quality and water ways. Environmental stewardship is labour intensive and may require practices that are sustainable in the long run, but not profitable in the short-run. Since these long-term profitability increases are captured in the price of land, family farms have an incentive to undertake them while industrial farms, with their focus on meeting the incentives created by the tournament, are less likely to do so. As an example, the corporate farm may be more likely to use marginal land for crop production when it is better suited to livestock production; they may also crop “pot and kettle” land types rather than sowing them to perennial forages.

A move towards the corporate farm model raises questions about the security of the future food supply. Will Canadians view food quality and availability as more secure with 200,000 family farms than with 2,000 industrial farms? Will consumers be worried about the corporate concentration that will characterize the aggregators? A move towards industrial farms is likely to affect rural Canada negatively; a major exodus of farm families will make rural communities redundant and it is likely that there will be a decline in infrastructure development outside major cities. For instance, the rise of the industrial model will likely mark the disappearance of traditional supply channels (e.g., the small- to medium-sized independently owned businesses that currently dot the Prairies) for equipment and farm inputs. Will these changes be of concern to the Canadian population, most of whom live in urban areas? The future structure of the grains sector also has an impact on Canada’s cultural heritage. The family farm has historical roots in Canada. Do Canadians place a value on a rural landscape speckled with family farms?

The Policy Path

The vision that is chosen for the grains sector will determine the policy direction that Canada should take with respect to agriculture: industrial farms require an entirely different policy set than do family farms. Policies relating to product marketing, price discovery, innovation, exports, infrastructure, and government support must all be considered.

Family farm policies

Policies to support the family farm will be required if this structure is to be rejuvenated and rebuilt. Collective marketing agencies, such as co-operatives and the Canadian Wheat Board (CWB), will continue to play a role in the family farm model; these organizations will be required to achieve coordination along the supply chain (in the industrial model, this coordination is provided by the integrator). Note, however, that the collective marketing agencies will not remain unchanged – many of them will have to undergo tremendous modification in order for them to play a role. On the innovation side, support of the family farm will require the funding of public and producer controlled research and development (R&D); compared to the industrial model, there will be freer access to new innovations such as new varieties. As in Europe, income support can be expected to target the multifunctionality of agriculture; farmers will be rewarded for their adherence to practices that promote biological diversity, soil and water health, food quality and safety, and environmental benefits. Agri-business funding to support farmer-owned organizations can be expected. Provincial and federal departments of agriculture can be expected to take on more vital roles in the industry, while universities will be looked to as a source of public information as well as both applied and basic R&D.

Industrial farm policies

Policies to support the industrial farm model can be expected to eliminate government intervention in marketing; the CWB and supply management would thus be removed. As described above, supply chains will become more integrated with integrators having ownership of the farm input and processing stages. As a consequence of this integration, price discovery becomes less and less public. Strong intellectual property rights can be expected to be in place and to provide the incentive for integrators to undertake R&D and to internalize testing protocols for new products and new plant varieties. This R&D will be focused on activities that have immediate and direct payoffs; government will provide basic research – with its longer-term benefits and its public good nature. Since the integrators supply the inputs and contract for the output, they can be expected to undertake the extension work associated with getting farm operators to use new technologies. Government financial support will be aimed at easing farmers' exit from farming and developing agri-business ventures such as large scale processing. Since government agricultural departments would no longer be undertaking R&D, carrying out extension activities and providing income support,

they may eventually disappear; other government departments can carry out functions such as environmental and food quality regulation. The role of universities – and particularly colleges of agriculture – can also be expected to change; they will increasingly be viewed as trainers of farm managers and as places where integrators can go for particular research expertise.

Conclusions

The grains sector on the Canadian Prairies is at a critical crossroads. Based on its current path, the industry is headed towards a structure characterized by corporate farms that are internally coordinated by large conglomerates. Without targeted policy interventions, this industrial model of primary agriculture will dominate. The family farm will be preserved, albeit in a modified form, only if Canada's urban population has this as its vision for agriculture in the 21st century.

References

Knoeber, C.R. and W.N. Thurman (1994) "Testing the theory of tournaments: An empirical analysis of broiler production." *Journal of Labor Economics* 12, 155–179



