



# **Action Committee on the Rural Economy**

## **Grains and Oilseeds Working Group**

### **Final Report**

December 2002

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# I. Introduction

## Formation of the Grains and Oilseeds Working Group

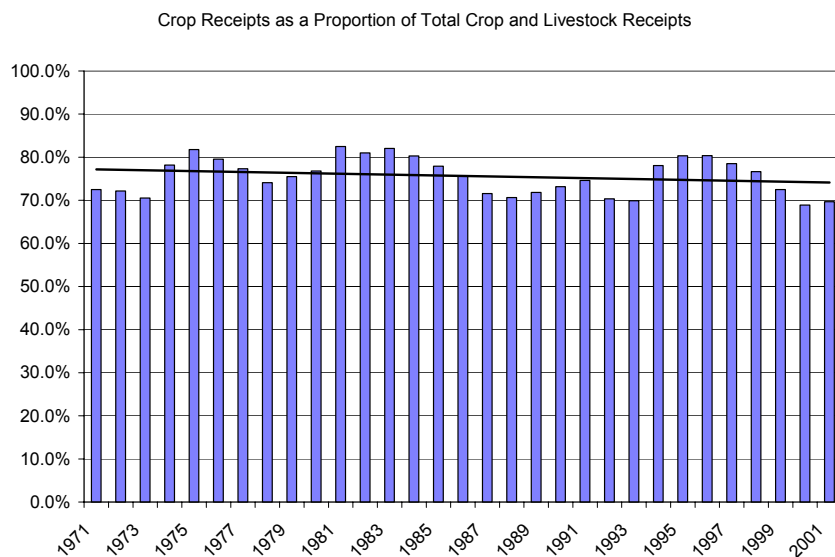
At an Action Committee on the Rural Economy (ACRE) general meeting on November 9, 2001 the concern was expressed that the Committee's various sub-committees had not devoted enough time to the discussion of issues relating to the grains and oilseeds sector, and to issues relating to transportation within the province.

In response to that concern, two working groups were struck to examine the topics, namely the Grains and Oilseeds Working Group and the Transportation Working Group. The working groups were asked to examine the topics, and report back to the ACRE Committee. This report is the written submission of the Grains and Oilseeds Working Group.

During the course of its discussions the Grains and Oilseeds Working Group expressed a concern that the importance of the grains and oilseed industry to the province is underestimated and, on the whole, it does not receive the credit it deserves. The Grains and Oilseeds Working Group cautions the provincial government against diverting money away from grains and oilseeds to other sectors.

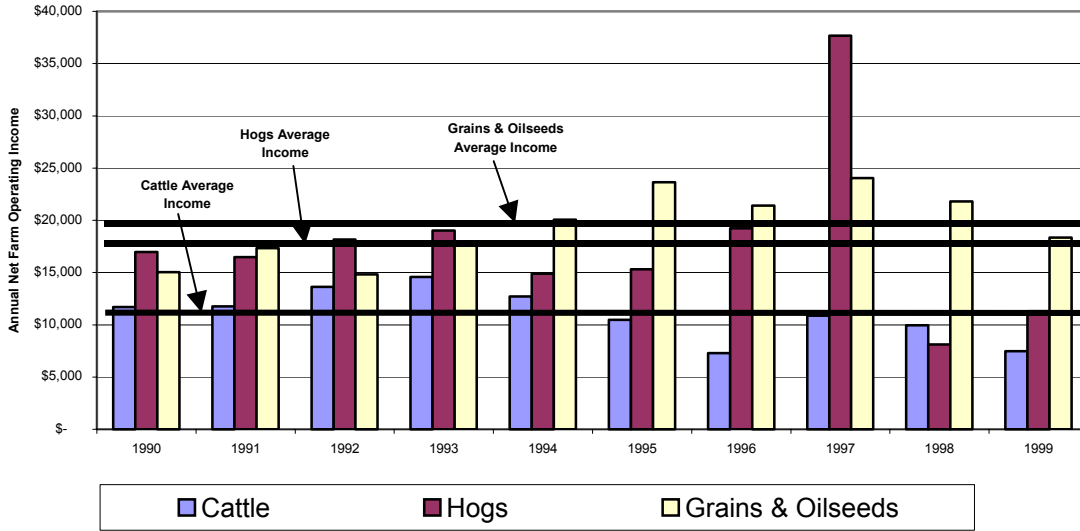
## II. Background on Grains and Oilseeds sector

Saskatchewan's agriculture and food industry is a vital part of the economic growth and development of the province. Within agriculture, the grains and oilseeds sector is still the dominant economic force, despite the limited credit or recognition it often receives. To be specific, over 70 percent of the province's total agricultural market receipts typically comes from grains and oilseeds sales.



While the trend indicates a long-term decline in the proportion of grains and oilseeds receipts, the sector will continue to generate the majority of Saskatchewan's revenue in the long-term. The following table demonstrates that the grain and oilseed sector has had a better net farm operating income in comparison to other farm types such as cattle or hogs.

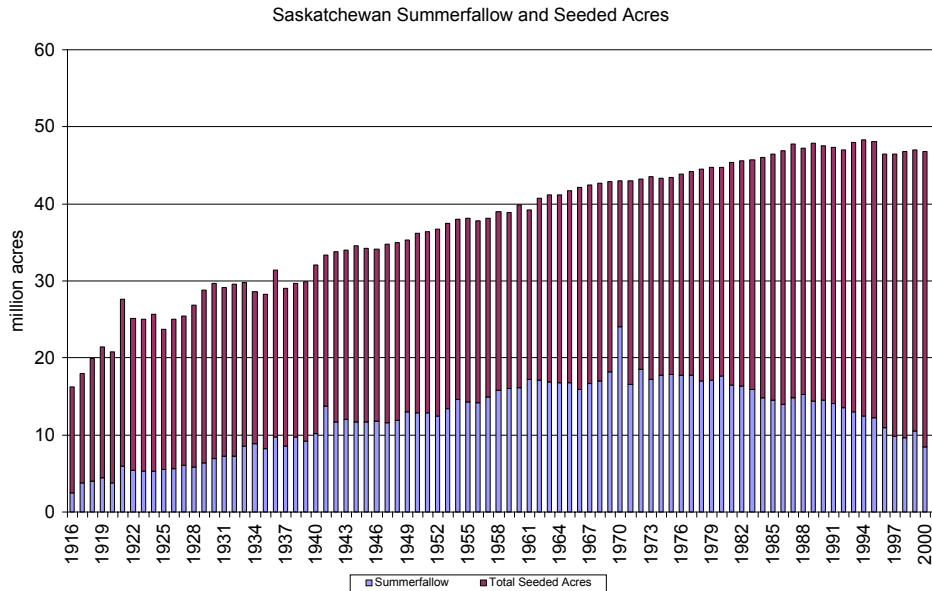
**Saskatchewan Average Farm Family Income  
by Major Revenue Source**



(The above farm-type categorizations was determined by the dominant source of income – that is, greater than 50 per cent of net farm operating income – and does not include incorporated farms in the analysis.)

**Change is the only constant**

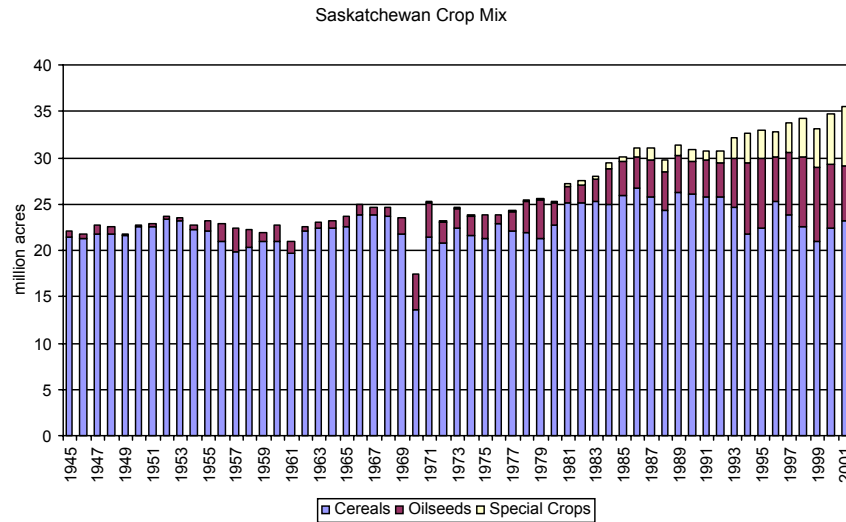
The Grains and Oilseeds sector should never be perceived as being static. We have seen and will continue to see a number of significant changes in what, and how, crops are produced. For example, the acres of summer fallow in the province have been steadily declining since 1973 (with the exception of 1970’s LIFT-program-induced summer fallow acres).



The trend clearly indicates how Saskatchewan producers have adopted and applied technological innovations. These innovations have ranged from fertilizer to pesticides to reduced- or zero-tillage to genetically modified (GM) crops. Producers are expanding their production options and sustainability utilizing a greater percentage of the cropland on an annual basis. Even with

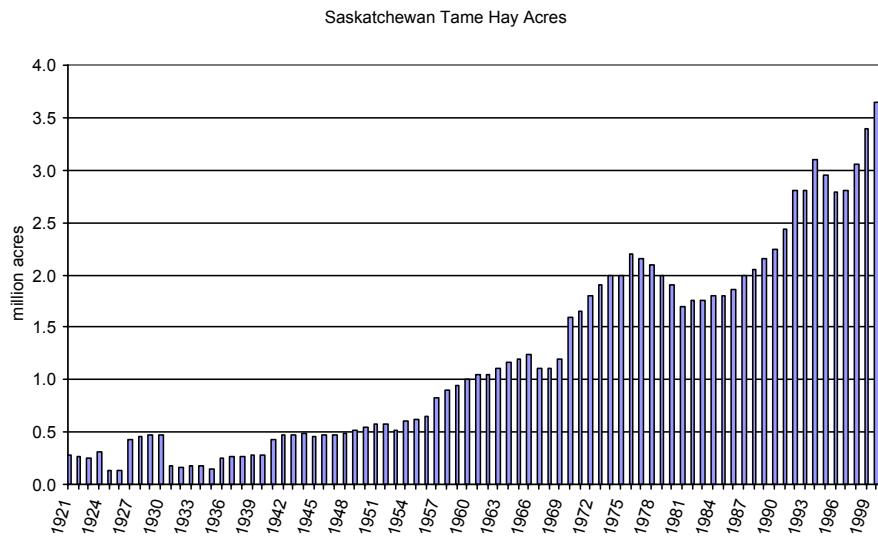
the drought concerns in 2001, in absolute area, Saskatchewan has not had this little summer fallow since 1932.

As we've been bringing more and more acres into production, we have found more and more crops to put on those acres.



By now, no one should question the willingness of Saskatchewan producers to pursue any and all profitable opportunities.

In that same vein, numerous producers are examining the alternative of forage production or conversion to grass pasture as an alternative to traditional crops. As such, we've seen an increase in improved pasture, forage, and tame hay acres in recent years.



Whether this recent increase is merely a cyclical response to recent returns from forage and pasture (and the livestock sector that they supply), or part of a long-term shift from annual to perennial crops is a matter of some debate within the sector.

It is important to note that Saskatchewan has an advantage over many competitors because of its large land base, low cost of production, state of the art technology and production expertise. In

addition, Western Canada has a natural advantage in the production of high quality grains, oilseeds and specialty crops. Our competitive advantage lies with quality and not quantity. Saskatchewan producers have responded to financial and competitive pressures by implementing agronomic innovation (e.g. direct seeding) and pursuing alternate cropping and processing opportunities to take advantage of our natural advantages. Examples are listed below.

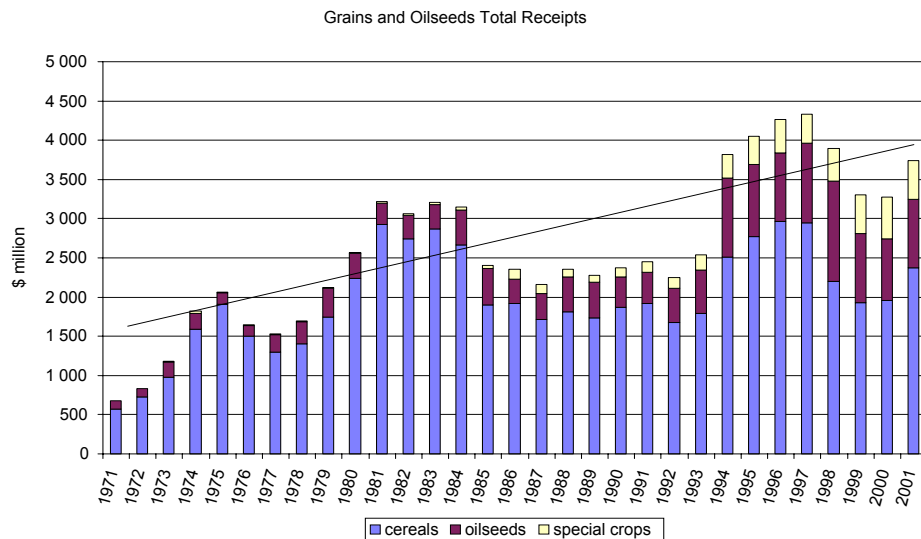
- Since 1989, broad-leafed crops have generated greater revenue per unit than cereal crops. Cereal crops continue to dominate cultivated acres because they require less input expense and less management. They are also less susceptible to potentially devastating diseases and offer rotational benefits.
- Canadian Prairie Spring wheat acreage in western Canada has doubled in the past five years and is expected to more than double in the next five years.
- Export of oat as a food product has increased 50% in the past five years.
- Human consumption and whole seed flax in animal feeds are growing.
- Saskatchewan has between 2,000 and 3,000 mustard producers and a number of facilities equipped to clean mustard to export standards. Agriculture and Agri-Food Canada's Saskatoon Research Centre is home to one of the most successful mustard breeding programs in the world.
- Research led to new production practices that helped adapt canola to the drier areas of the province and the ability to produce canola varieties with several different oil profiles.
- Special crops are grown on over 6 million acres in Saskatchewan each year (6.2 million acres in 2001). The production and sales of special crops for domestic and export markets contributes over \$750 million annually to the Saskatchewan economy.
- The processing of special crops supports over 125 processing facilities. These facilities contribute further in value added processing and over 1,050 full and part-time jobs in rural Saskatchewan. The processing of special crops will continue to increase in Saskatchewan. For example, essential oil steam distillation and a red lentil splitting facility are under construction in Saskatchewan.
- Saskatchewan is the largest producer and exporter of green lentil, canaryseed, and yellow mustard in the world. Canada is the largest exporter of peas in the world, with Saskatchewan producing approximately 70% of Canadian peas. Chickpea production in Saskatchewan has grown to where Canadian product now occupies 40% of world exports. Saskatchewan provides the majority of coriander and caraway imports to the United States.
- Two of the five inoculant companies in North America are located in Saskatchewan to serve the growing pulse/legume industry. As pulse/legume acres increase, inoculant companies operating in the province will also expand resulting in increased employment.
- The condition of Saskatchewan hay fields, pastures and rangelands has improved over the last decade and can improve further with increased adoption of technology.
- The current forage sector involves a total acreage of rangeland, pasture and hay land of approximately 22.5 million acres and involves 25,000 forage growers. Provincial forage resources support 2.87 million cattle and calves. The value of the province's annual hay crop is over \$228 million, while the value of agricultural products from rangelands exceeds \$200 million, based on Crown land lease rates.
- Saskatchewan has about 100,000 acres in alfalfa seed production with an estimated 500 growers. Saskatchewan production accounts for about 75% of Canadian production. 90% of Saskatchewan production is exported. Alfalfa for processing is grown on about 110,000 acres.
- Four plants in northeast Saskatchewan produce the total Saskatchewan forage supply of dehydrated and sun cured pellets for export. Two of these plants also produce cubes. In 2001, Saskatchewan produced 118,000 tonnes of dehy pellets, 19,000 tonnes of suncure alfalfa

pellets, 31,000 tonnes of alfalfa cubes, and 15,000 tonnes of compressed hay. The total value of processed forage production in 2001 exceeded \$40.4 million.

- Saskatchewan has approximately 35 organic processors and 1,100 organic producers, of which approximately 50 include certified organic livestock in their operations. The number of producers seeking organic certification is growing by an estimated 20% per year. Cereal crops account for the majority of organic crop acres, then flax and lentils.
- Recent price premiums for organic grains range from 25% to 100% over conventional grains.
- Saskatchewan has approximately 5,500 acres of mixed vegetables, including market gardens and table potatoes, with a commercial value of roughly \$20 million.
- There are approximately 33 major seed potato growers in Saskatchewan with approximately 5,300 acres of production valued at \$20 million. Saskatchewan seed potatoes are considered by the market as the cleanest and highest quality seed source in North America.
- The total small fruit (including strawberry, raspberry, Saskatoon, etc.) production acreage in Saskatchewan is currently estimated at 1,200 to 1,400 acres planted with approximately 700 to 800 acres harvested in the 2001. The total tree fruit acreage (including apples, hybrid sour cherries, plums, etc.) is currently estimated at approximately 100 to 120 acres, operated by 40 to 50 growers. In 2000, there were over 50 processors utilizing fruit as part of their processing operation.
- The apiculture industry currently provides 1000+ seasonal jobs in rural communities across the north of the province, generating \$24 million in honey and wax sales in 2001.

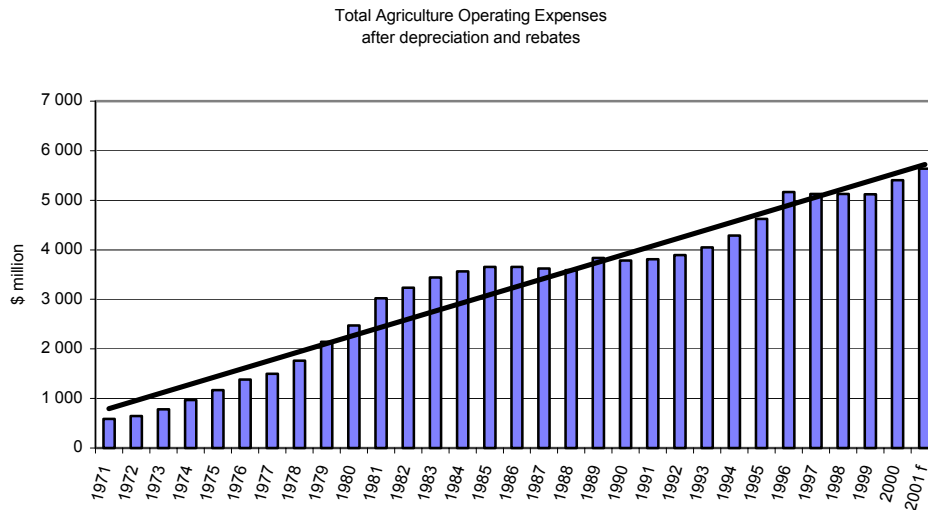
### **Grains and oilseeds are generating more money**

Despite the numerous challenges facing the grains and oilseed sector, it has a well-established record of producing more, and more valuable, crops.

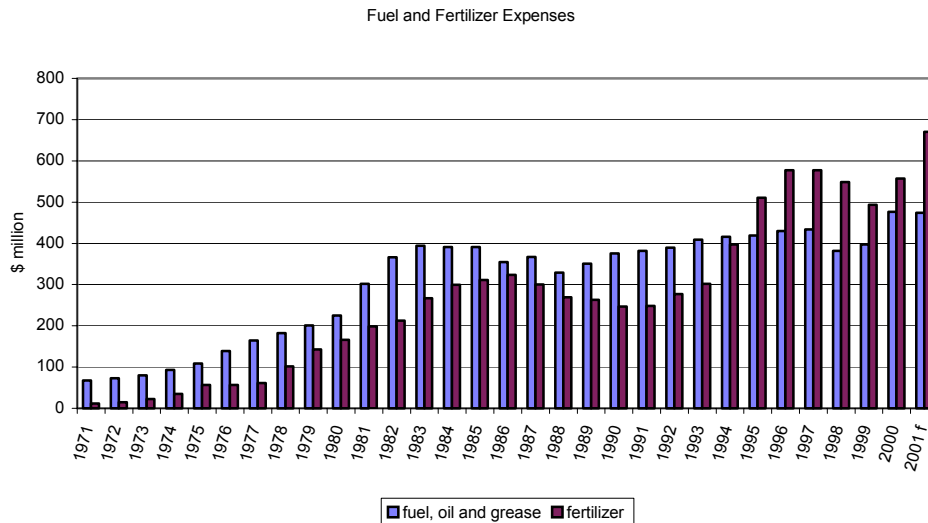


## But taking more money to make money

Even as total revenues are increasing, crop production expenses are increasing as fast or faster. The following figure indicates the dramatic growth in expenditures in agriculture production.



While total expenditures have gone up by an average of 8 percent per year in the last 30 years, a closer examination shows some grains and oilseeds expense categories that have more dramatically increased. For example, the expenditure on petroleum-based products (like fuel and fertilizer) has increased by 10 percent per year.

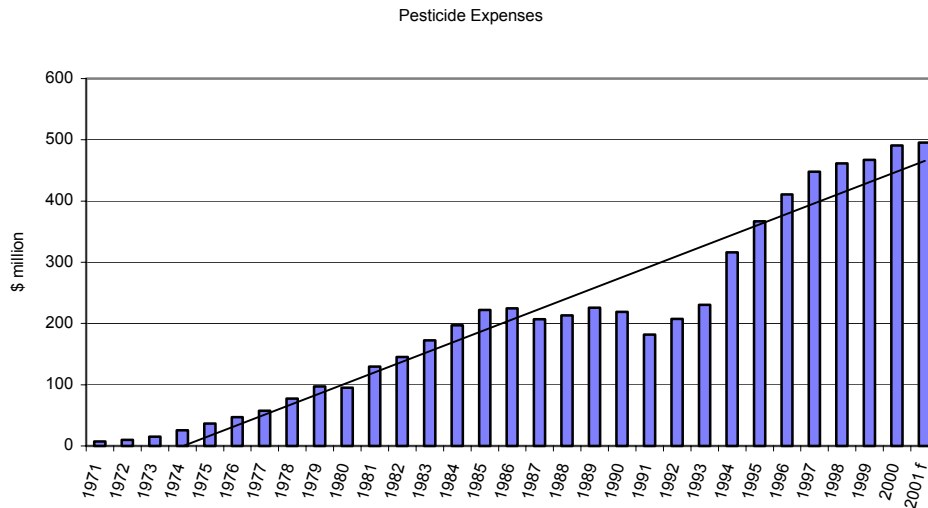


Recent price increases in fuel over the past number of years have led fuel expenditures to rise even as more farmers have made the move to zero-till, and the province has generally had some dry years for harvest.

Strong demand and limited supplies of natural gas last year provided the industry with a sharp reminder about the impacts other sectors can have on farm input prices. It is a lesson that few farmers will soon forget.



Pest problems seem to be a growing area of concern for the province, especially from an expenditure perspective. Weed control is an ongoing concern, however, a new challenge for producers is the effective management of herbicide options to ensure that weed resistance to herbicides does not become a production constraint.



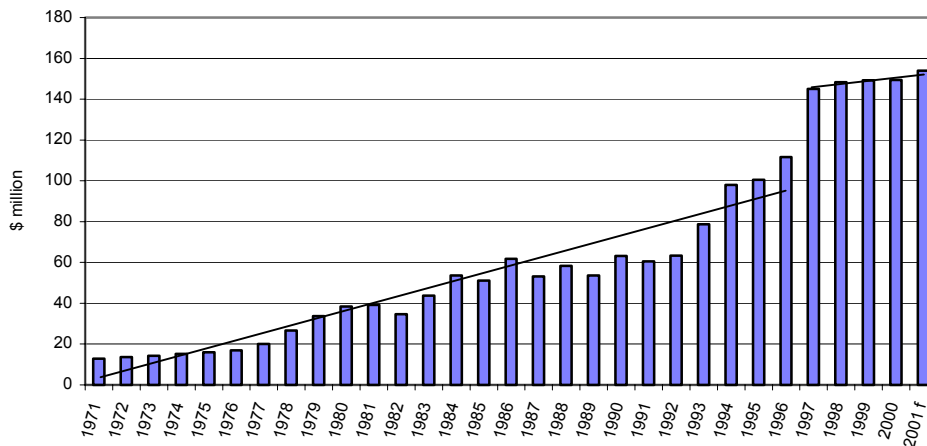
Weed control costs, while growing, are generally increasing slowly. Insect challenges tend to be more cyclical in nature. Bertha armyworm and diamondback moths have been problematic in recent years. And after a multi-year hiatus, grasshoppers appear to be making a comeback into the province in significant numbers. Wheat midge populations increased in the province during the 1980's and 1990's, but recently the infestation has decreased and producers are managing the problem with rotational measures as much as possible.

Perhaps the most recent emerging pest problem facing grains and oilseeds producers are plant diseases. From fusarium, leaf, and root diseases in cereals, to aschochyta blight in chickpeas, to powdery mildew in field peas, to anthracnose in lentils, to sclerotinia and blackleg in oilseeds, plant diseases continue to adapt to the plant's natural defenses faster than breeders can build in disease resistance. This has left many producers with little option other than to invest in fungicidal treatments for their crops. Their experience has been that fungicides are neither cheap, nor necessarily a single-application-per-crop treatment.

So even as producers attempt to only utilize pesticides in conditions where it is economically feasible to do so, the expenditure on these commodities continues to rise.

Producers have also attempted to manage their pest control costs through the acquisition of new plant varieties. But new seed varieties come with a cost. As indicated by the following graph, seed costs are another expense item that has steadily been increasing.

Commercial Seed Expenditures

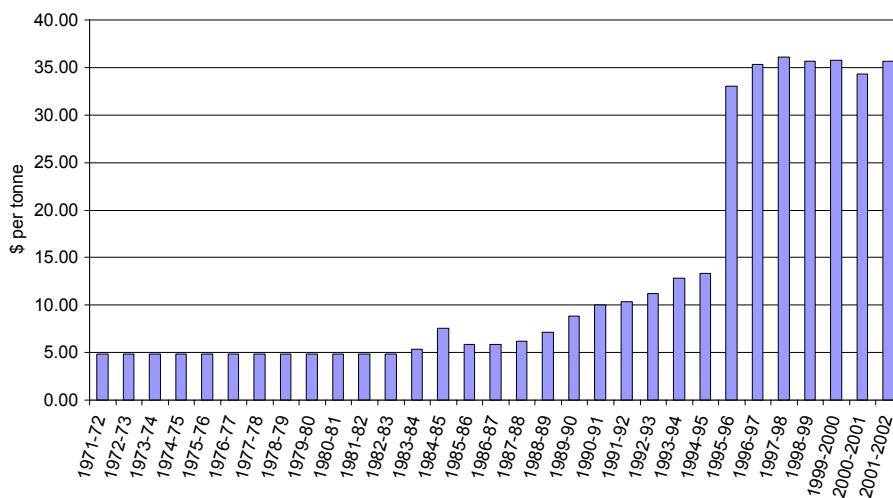


As indicated by the data, the increase in seed expense coincides with the advent of Plant Breeders Rights (PBR) and GM seed technology. Although producers often have increased agronomic options, there are often new cost implications through licensing fees, or technology use agreements.

Along with these new technologies come new issues for growers. Specifically, the issue of consumer and market acceptance of GM crops made itself evident. The advent and co-mingling of GM canola with the non-GM canola led to the rejection of all Canadian canola by the Europe Union. But other markets accepted the crop, so global marketing has continued, for the most part. However, the potential development of GM wheat has caused the issue to resurface. The number of markets concerned about GM wheat, and/or saying that they would not purchase GM wheat, is significant, and the developers of the technology are closely examining the issue.

A final expense item that has had significant impact on Saskatchewan producers, but has not been at the forefront of discussion recently, is rail freight rates. With the elimination of the Western Grain Transportation Authority (which itself replaced the Crow Rate freight agreement), producer's freight rates went up dramatically. The graph indicates how significant the increase in freight rates was.

Saskatchewan Freight Rate, Basis Saskatoon  
#1 CWRS Wheat

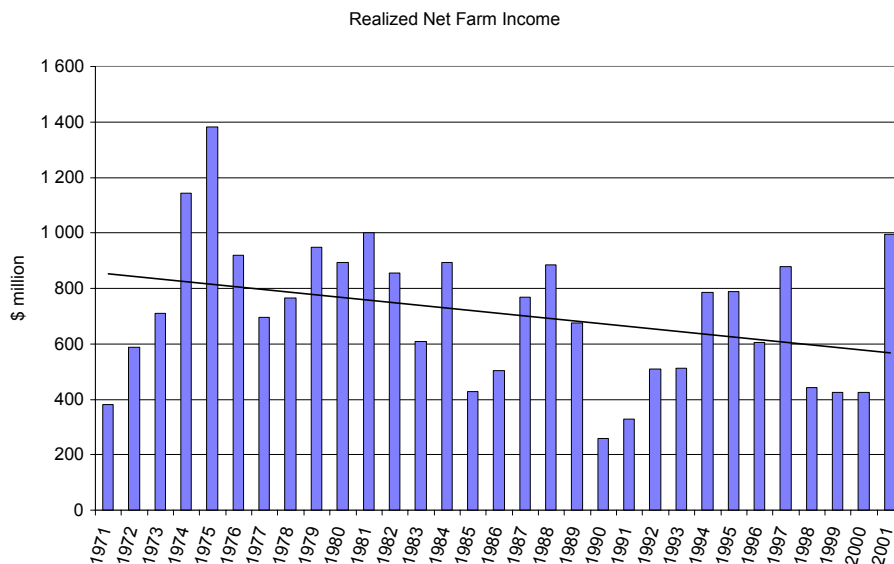


The impact on Saskatchewan should not be underestimated. Arlee McGrath recently relayed to a group of conference attendees at the *Grainworld 2002* conference in Winnipeg that the elimination of the freight subsidy decreased his farm's profitability by 75 per cent (Western Producer, March 7, 2002). To express the impact on Saskatchewan, in 1999 total freight costs were estimated at approximately \$1.3 billion, or more than 35 percent of the total value of crop receipts for the year.

The removal of the freight rate subsidy was dramatic and very significant, and the increase in costs remains an item that producers continue to struggle with.

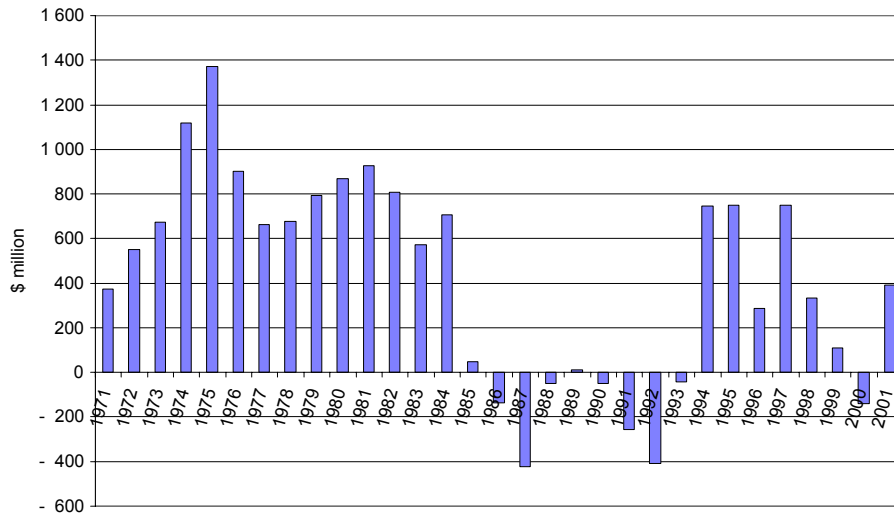
**So what's the bottom line?**

The impact of all the aforementioned factors comes together in the financial statements of Saskatchewan's producers. For the province as a whole, realized net farm income has generally been declining since 1975.



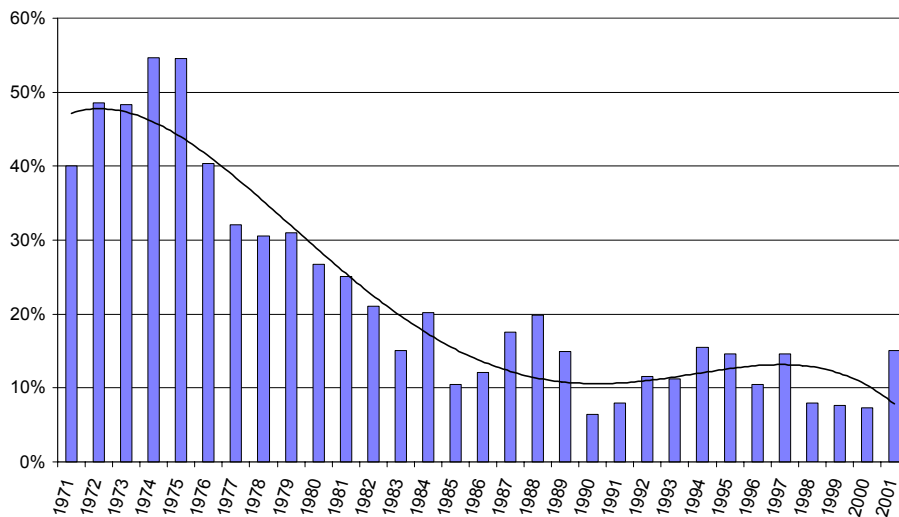
But the existence of safety nets and other income support measures have somewhat cushioned the blow. If government income support or other emergency payments were deducted from realized net farm income (with the exception of crop insurance which deals with yield or production problems, not price problems), the realized net farm income “from the marketplace” becomes a sobering fact that is at the heart of the farm communities’ general concerns.

Realized Net Farm Income with Crop Insurance but without all other Program Payment



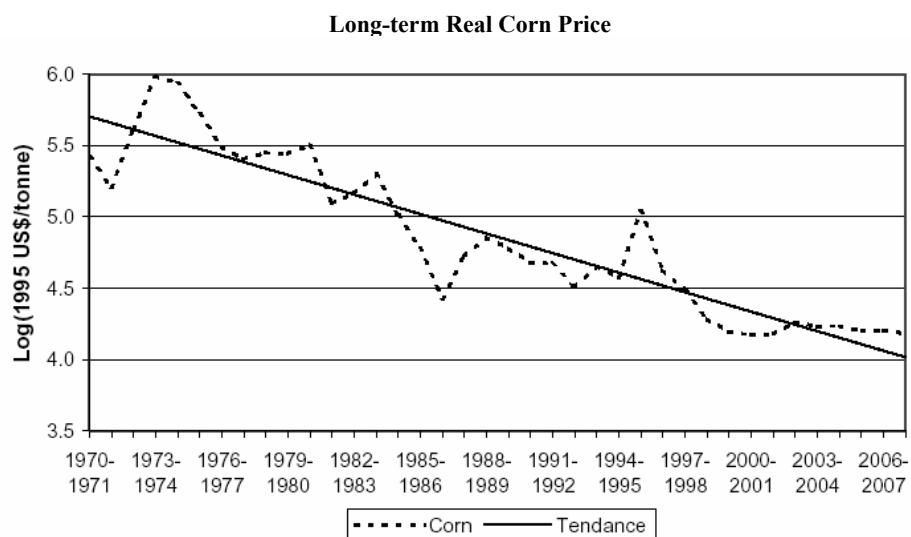
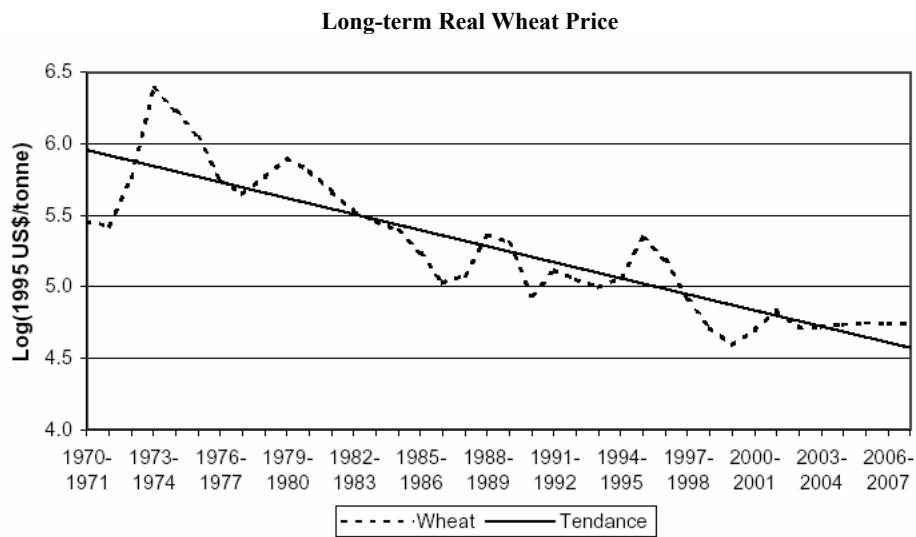
The other measurement that demonstrates poor farm profitability is declining margins in agriculture. While total farm cash sales figures are increasing, farm net income is falling. The following graph clearly shows the trend of declining margins.

Realized Net Farm Income as a Percentage of Total Farm Cash Receipts



As mentioned before, the declining margins take into account government payments, and therefore would be even lower if they were removed. While this is a harsh reality, it is not entirely unpredictable or unprecedented. Primary production (whether it be forestry, mining, fishing or agriculture) is typically characterized by falling market prices as technological advances increase the efficiency of production. Either more of the commodity can be profitably supplied at the old price, or the same amount of profit can be made selling the same amount of the commodity at a lower price. Regardless, given stable demand, the margin in the production of the commodity declines.

As examples, the following graphs are of the long-term real price of wheat and corn in world markets, expressed in US dollars, as included in Agriculture and Agri-Food Canada's Medium Term Policy Baseline.



Understanding these facts Saskatchewan producers have attempted to become as efficient as any producers in the world. But globally Saskatchewan grains and oilseed producers are up against stiff competition. For example, South America (particularly Brazil) is continually bringing more and more extremely fertile lands into production, and their costs are such that they have an estimated US\$1/bu cost of production advantage over US soybean producers. Their increasing oilseed and corn production continue to weigh on the markets. Last year, the former Soviet Union (FSU) demonstrated its ability to supply cheap feed grains to Europe and parts of the Asian subcontinent. Generally, more marketers are commenting that “minor exporters”, as they were called in the past, are now taking a significantly larger share of world trade. For example, the combination of weather problems in Canada and the European Union (EU) and good crops in the FSU region meant that the minor exporters in the Black Sea region accounted for more than 42 percent of world barley trade this year. Similarly for wheat and durum, about 22-23 percent of trade was done by minor exporters.

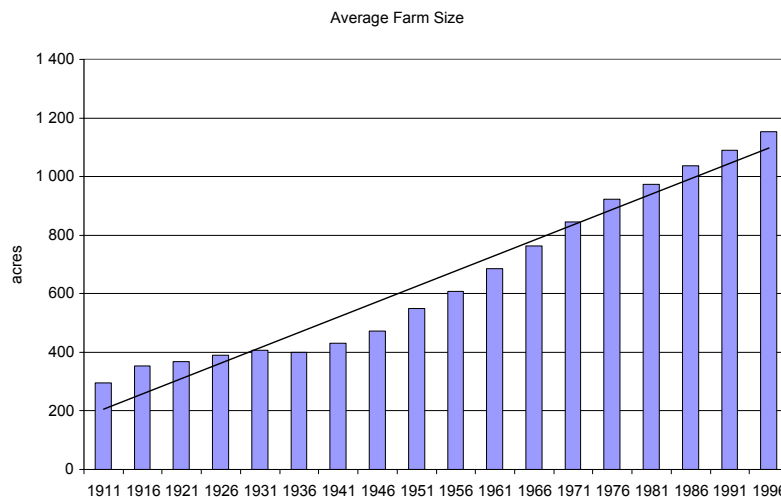
There are a couple of other factors that will affect our global competitiveness. First, there is China. China is getting the reputation for being the largest wildcard in agricultural commodity trade. Previous predictions were that China would become a vast source of demand for grain and oilseed commodities. However, even with their entrance into the WTO, it appears that China will maintain its go-slow approach to opening markets and letting trade occur unfettered. And with its major investments in new technology it may become self-sufficient or even a consistent and significant exporter of commodities. In 1999 China had one of the world's largest investment in biotechnology and GM crops at US\$ 112 million with 2,000 researchers developing GM wheat, rice, corn and soybeans.

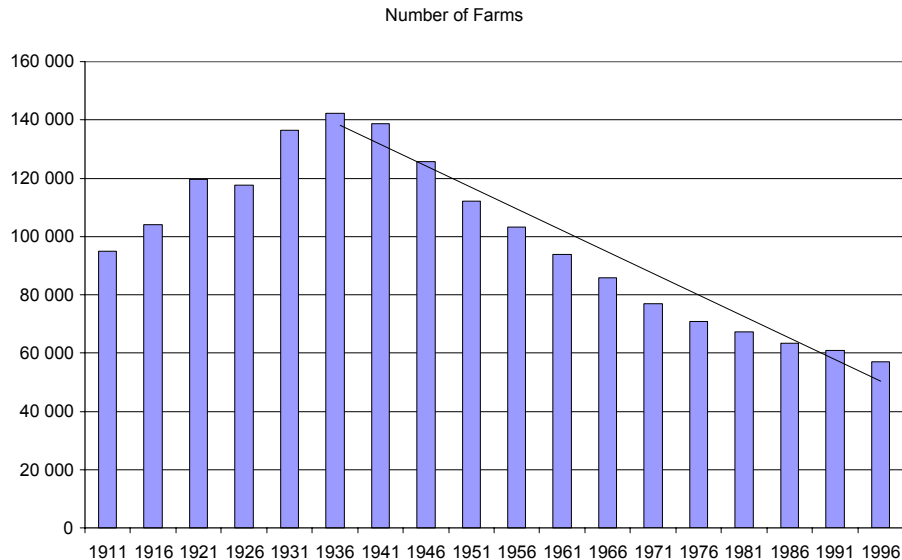
A second factor is the EU. Ongoing subsidies within their Common Agriculture Policy (CAP) have long been a concern for Canadian farmers. But declines in the value of the European currency have meant that little to no subsidies have been required for most grains and oilseed commodities as of late. Currently, the EU is considering expanding the EU to include a number of eastern European countries, and the budgetary concerns of how to do that are leading some to consider sweeping changes to the CAP, i.e. reductions in support levels. However, this remains highly contentious. Generally, it is not believed that European production levels will be falling in the near term due to any changes in agricultural support policy.

A final factor affecting Canadian competitiveness is our proximity to the United States (US). US farm support levels have artificially raised the production levels for soybeans, corn, wheat, and oilseeds by guaranteeing producer prices above market levels. This increased production has further depressed global market prices for the major grains and oilseeds. Only severe disease concerns in the US malting barley and durum growing areas have prevented these markets from being depressed as well. In response, many Saskatchewan producers have attempted to dodge the impacts of the depressed prices by switching to specialty crops (as indicated in the third graph included in this report). However, the US has currently expanded price support to field peas, lentils, and chickpeas. Increased US production of these crops in the future will not bode well for Saskatchewan producers.

### **Where does that leave Saskatchewan producers?**

All these factors have manifested themselves in a couple of ways. Better technology and declining margins have led to increasing farm size and fewer farm operators.





These trends have given rise to some further scrutiny on the makeup of farms.

**Saskatchewan has a diverse mix of farm types.**

The data conveys what is typical in many industries. In agriculture, there are a number of sizes of farm operations. Many of these farms do not generate enough farm sales to be viable on their own. In fact, 64.8 percent of farms have a larger proportion of income coming from off-farm sources rather than on the farm. As well, 26.3 percent of farms generate between \$10,000 and \$99,999 in gross sales, but only represent 12.4 percent of total agricultural sales. Meanwhile, larger farms generating from \$100,000 to over \$500,000 in gross sales were 35.2 percent of farms, but had 67.0 percent of total sales.

Overall, the general trend to fewer and larger farms, and declining rural populations is an ongoing concern. As such, it is one of the issues driving the province’s whole response to the issue, from which this report comes, i.e. the Action Committee on the Rural Economy.

**III. Scope of the GRAINS AND OILSEEDS Working Group’s Discussion**

**Limitations**

The Grains and Oilseeds Working Group faced a number of limitations in undertaking their examination of the grains and oilseeds sector.

The first limitation was time, in that it was anticipated that the Working Groups would target a late March release date for their final reports in order to coincide with the release of the ACRE committee’s Final Report. It became apparent that was not a strict requirement. However, the Grains and Oilseeds Working Groups still attempted to target a spring 2002 completion date.

The second limitation was personnel. The Grains and Oilseeds Working Group was always a voluntary committee from its inception. While numerous people attended the initial group meeting, constraints on time and schedule conflicts resulted in a relatively stable, and smaller core of attendees to examine issues and discuss topics of importance.

Finally, the working group recognized that many of the issues facing the grains and oilseeds sector are international and national in nature. With that recognition in mind, the working group tried to focus on issues that are within the province's jurisdiction, which is consistent with the overall focus of the ACRE committee.

### **Focus of Grains and Oilseeds Working Group Examination**

In recognition of the practical and jurisdictional limitations facing the group, the discussions of the Grains and Oilseeds group focused on the following issues:

- Saskatchewan Farm Security Act
- Research & Development
- Value Adding Opportunities for grains and oilseeds
- Environmental Farm Planning
- Genetically modified Wheat
- Trade & Trade Distorting Subsidies
- Canadian Grain Commission

The Working Group developed recommendations related to the above issues. However, it should be noted that the recommendations do not necessarily represent the views of all members or the organizations that they represent.

## **IV. Issues and Recommendations**

### **1. Saskatchewan Farm Security Act:**

#### **a. Discussion:**

It is perceived that the current restrictions on farmland ownership can lead to the restriction of economic development in rural Saskatchewan by discouraging investment from outside the province. Alberta and Manitoba have less restrictive rules. Provincial legislation that is equivalent to other jurisdictions could result in economic development in Saskatchewan.

The Working Group discussed the need to put forward a recommendation regarding the Farm Security Act. It was decided to modify the existing recommendation developed by the Farm Structure Farm Income Sub-Committee that was not included on the priority list by the ACRE Committee as a whole.

Given that the current Saskatchewan Farm Security Act has not resulted in the intended results, and that the opportunities in this province far out weigh the capacity of our internal capital resources, the attraction of outside investment will assist in stimulating growth and economic development within the agriculture sector.

In an effort to put our industry on a more level playing field with neighbouring provinces when it comes to attracting outside investment into the industry, the province should consider changes to the Farm Ownership Provisions under the Saskatchewan Farm Security Act. These changes should harmonize Saskatchewan's legislation with Alberta and Manitoba in a manner that encourages residency and economic development in Saskatchewan.



b. Recommendations:

The Working Group developed recommendations related to the Farm Security Act. However, the Saskatchewan Legislature recently amended the Act and these amendments essentially meet the spirit and intent of the recommendations developed by the Grains and Oilseeds Working Group. As a result the WG decided to delete their specific recommendations from the Final Report. It should also be noted that the representative of the National Farmers Union does not agree with the amendments to the legislation and did not support the recommendations developed by the Working Group.

2. **Research & Development**

a. Discussion:

The Working Group discussed many issues related to research and development priorities and funding in Saskatchewan. The invited presenters outlined many challenges that are presently being faced by Saskatchewan's publicly funded research institutions.

These challenges included the difficulty in attracting students into traditional plant breeding disciplines, the relative amount of research support coming from industry may decrease as there is more consolidation within the industry, the difficulty and complexity to work with industry, because of intellectual property management and conditions demanded by industry partners, the challenge to maintain infrastructure including field equipment, career security at the Crop Development Centre, and the competing interests of commodity groups.

The Working Group discussed the benefits and potential of producer funds being directed to research. It was acknowledged that producer funds might constitute a greater percent of overall research funding in the future. However, the competition for research dollars was also noted and the perception that some commodity groups seem better able to leverage funding than others.

It was agreed that it would be preferable that any producer levy or check-off be mandatory and that it would be desirable that it be implemented on a national or regional basis. The need for marketing research being eligible for funding from research and development funds was also noted.

b. Recommendations:

- *A mandatory producer levy should be considered. That the funds raised should be not be commodity specific and a producer driven process be developed and implemented that identifies emerging sectors or market opportunities for existing and new crops, for both food and non-food uses.*
- *The federal and provincial governments implement strategies that improve the balance between public and private plant breeding efforts where the public supported breeding meets specific gaps or needs of Saskatchewan producers and results in public ownership of intellectual property.*
- *Research related to crop varieties should be focused on variety development that results in specific, profitable, market opportunities for producers.*
- *That SAFRR support research into alternate methods of control to strychnine for ground squirrel and pocket gopher control.*

3. **Value Adding Opportunities for Grains and Oilseeds**

a. Discussion:

The Working Group discussed a number opportunities and options available to producers to add value. The Working Group emphasized the importance of producer groups in developing any strategy developed to identify specific opportunities and the options in support of these opportunities.

The Working Group noted that financing is a constraint for producers wishing to pursue value added opportunities. The Working Group supports the Agriculture Subcommittee recommendation “that the government develop an option that would allow self-directed RRSP contributions to be used in support of local operations”.

The Working Group also discussed the importance of getting municipalities more involved and/or interested in value-added development initiatives. It was agreed that there also should be a concerted effort on part of government to have more inter-departmental cooperation.

The Working Group discussed the role or influence of the Canadian Wheat Board (CWB) in value added opportunities. The Working Group recognizes that the CWB impact in value added opportunities is a contentious issue. However, the Working Group would recommend to the Provincial Government that the CWB be encouraged to investigate the means of initiating profitable, value added opportunities for producers and industry.

It was strongly held by the Working Group that the objective of any grains and oilseeds value-added strategy is to have the benefits accrue to the producer.

The WG also discussed the future needs of the ethanol industry. It was agreed by the Grains and Oilseeds Working Group that as the Province explores the ethanol industry as an economic development opportunity, there are a number of issues that

require study or consideration as they relate to the grains and oilseeds sector. Namely that that research should be conducted into appropriate grains and oilseeds varieties that are appropriate to the ethanol industry and that the impact of growing varieties suitable for the ethanol industry on the quality standards of the existing production and marketing system be determined. The WG also believes that the impact of growing varieties suitable for the ethanol industry on the feed grain industry be determined and that the overall economic impact and market opportunities of the ethanol industry be evaluated.

b. Recommendations:

- *The provincial government develops and implements a strategy that identifies high value crop opportunities, effective and competitive production technologies for new and existing crops and the appropriate skills and knowledge required for success.*
- *The provincial government provides adequate resources for research into new crops and value added opportunities for existing grains and oilseeds.*
- *SAFRR should recognize marketing as an important component of new crop development and value added initiatives and that marketing be incorporated into the mandate of the Agriculture Development Fund.*
- *That the provincial government encourage the Canadian Wheat Board (CWB) continue to have a free and open discussion with producers and industry to facilitate the development of the tools and policies necessary for a profitable value added sector for both producers and industry.*
- *Specific opportunities could include the following:*

Wheat opportunities

- Fusarium Head Blight, Wheat Midge, and Wheat Stem Sawfly have all seriously affected the cereal industry. Addressing these issues could improve total provincial on-farm revenue by 10 to 15%. (\$15 to \$20 million)
- Improving agronomic practices will help producers capture additional revenue from production of high quality wheat. Assuming the CWB's 2007 projections and historical market share for Saskatchewan, high quality wheat sales will increase farm cash receipts in **Saskatchewan by \$6 million in the next five-year period.**
- Canadian Prairie Spring Red (CPSR) acreage is expected to displace a portion of the standard quality Canadian Western Red Spring (CWRS) acreage. Assuming the 2 million acre CWB projection by the year 2007, and assuming Saskatchewan's share is 50%, this translates into an increase in **farm cash receipts of \$9 million over the next five year period, which is a 0.7% increase** in the value of Saskatchewan's spring wheat production. Expanded livestock and ethanol production could provide a new market option for producers and could lead to increased area seeded to CPSR.

- In the next five years, hard white-grained cultivars are expected to claim 10% of all wheat acres in Canada. Based on current price premiums for white wheat, this translates into **an increase of \$17 million for Saskatchewan farmers**. It will also provide producers with more market diversification.

### **Barley opportunities**

- More resources are required in market development; that is, working with brewers in attempts to market our most superior varieties. Acceptance of our superior higher yielding varieties would improve returns and cropping options for producers.
- There is opportunity to develop grains with improved feeding traits like low-phytate barley. This would offer producers improved cropping options that will lessen disease pressures, lengthen herbicide rotations, and many other benefits of crop rotation, while providing new market option for producers.
- Expanded livestock and ethanol production could increase area seeded to feed barley resulting in increased returns (no freight) and provide a new market option for producers.

### **Oat opportunities**

- There is opportunity to develop grains with improved feeding traits like low lignin/high oil oat varieties. This would offer producers improved cropping options (can be a feed replacement for barley) that will lessen disease pressures (fusarium), lengthen herbicide rotations, and many other benefits of crop rotation, while providing new market option for producers.
- There is also an opportunity to increase oat production for human consumption. Use of oats for human consumption is projected to increase by 25% in the next five years. This would result in an additional 110, 000 tonnes of production sold for a \$60 per tonne premium or an **additional \$6.6 million in revenue** for producers.

### **Forage Opportunities**

- There is an opportunity to increase the condition class of native range. An increase of one class in the condition of the 16 million acres of native range will result in a 20% increase in productivity (\$200 million X 20% = \$40 million increased returns), increased carbon sequestration, and increased ecosystem health.
- Over five million acres of cropland has been identified as marginal. Conversion of this land would support expansion of the provincial livestock industry including the opportunity to diversify into custom grazing and hay production for off-farm sale. It would improve returns for producers by improving **net returns** per acre from an estimated net return of **\$5** per acre to **\$35** per acre. On five million acres this would amount to an additional **\$150 million** in net returns to producers. Conversion would also serve to help address environmental stewardship.

- Forages are a useful component of an extended rotation, helping to break up disease cycles and diversify weed control strategies. As organic farming expands there will be an opportunity for addition forage seed production.
- The existing alfalfa processing industry is relatively stable. Future market opportunities lie in long fibre products such as double compressed bales. The international market for long fibre products is large and growing. In total, there are approximately 12,500 acres of timothy for processing in Saskatchewan. Saskatchewan would have to expand production to 35,000 to 40,000 acres of export-grade timothy before a hay compressor could be feasible. (Average returns on an acre of timothy 2.2 tonnes X \$185 = \$407. Increased production is limited to a small portion of the province).
- Turf seed production in the Pacific Northwest is under increasing pressure. Many seed companies are looking for alternative areas to contract production. There is a niche opportunity for a limited number of Saskatchewan producers to obtain seed contracts for turf seed. We have the opportunity to expand up to 7,000 acres of production. This would generate over \$3.3 million in sales based on average gross returns of \$480 per acre.

### **Canola opportunities**

- **Increased competitiveness of canola production** - Palm and soybean production drive the oilseed complex and dictate, largely, the world price of canola. Subsequently, Saskatchewan canola competes against huge US subsidies and a relatively low cost of production in Brazil, Malaysia and Thailand. In order to remain competitive, we must increase revenue per hectare; this includes maximizing yield through proper agronomic practices (seedbed preparation, suitable crop rotations, adequate fertility and proper harvesting techniques) and reduced cost (integrated pest management).
- **Modified oil profiles** - Traditional canola oil is not suited to the fry industry due to the high level of polyunsaturated fat, which oxidize readily at high temperatures. In addition, traditional canola oil has very poor industrial lubricity properties. Any new categories of oil use would either expand acres seeded to canola or take away from traditional acres and tighten supply.
- **Canola oil as a fuel additive or biodiesel** - On an annual basis, a 0.1% blend of canola fuel additive in Canada's 40 billion litres of diesel fuel would account for 250,000 acres of production (.05per cent of 2001 seeded acres of 4.8 million). Canola biodiesel can help address greenhouse gas by displacing fossil fuels.
- **Aquaculture diets** - Aquaculture systems produce 30 million metric tonnes (MMT) of fish per year and require 30 – 33 MMT of feed. The annual supply of fishmeal is about 10 MMT, however, during the last El Nino, this dropped to 6.5 MMT. Saskatchewan's has the capability to produce 450,000 metric tonnes of meal per year, or 1.5% of the total annual aquaculture feed requirements. Accessing 5% of the global aquaculture feed market at a 5% inclusion would account for 75,000 tonnes of seed or 2.5% of Saskatchewan production.

- **Canola quality *B. juncea* and *S. alba*** - A major issue, identified by the Saskatchewan Canola Development Commission and the Canola Council of Canada, is supply. CQJ and CQA could help expand acreage in non-traditional areas and ensure adequate supply.

### **Flax opportunities**

- **Oilseed flax straw and fibre** - Saskatchewan produces 450,000 tonnes of oilseed flax straw per year. Currently we use about 7% for fibre, which equates to \$0.32 million at the farm gate and \$4.4 million at the industry sales level. If the industry would commit to managing 75% of the straw, heavier seeding rates, longer fibre, proper handling and storage, we could increase farm gate sales to \$41 million and industry sales to \$138 million. In addition, flax fibre can help address greenhouse gas emissions by sequestering carbon.
- **Fibre flax** - 100,000 acres of fibre flax, producing 2.5 tonnes per acre, would equate to farm gate sales of \$22.5 million and total industry sales of \$75 million.
- **Human consumption** - Global sales of functional foods and nutraceuticals, currently valued at \$140 billion U.S., are growing by 18% per year. Flax contains secoisolariciresinol diglucoside and omega 3 fatty acids, both important compounds in human health.
- **Dairy and beef cattle rations** - Research from the University of Kansas has shown that whole seed flax in cattle rations significantly decreases bovine respiratory disease and increases weight gain. The U.S. feeds over 30,000,000 cattle per year; a 10% use rate would consume 42,000 tonnes of flaxseed per year.
- **Aquaculture diets** - Aquaculture systems produce 30 million metric tonnes (MMT) of fish per year and require 30 – 33 MMT of feed. The annual supply of fishmeal is about 10 MMT, however, during the last El Nino, this dropped to 6.5 MMT. Not only can flax be an important protein substitute, but also, fish can convert the long chain polyunsaturated fatty acids into marine fatty acids. Current research suggests that, properly prepared, high oil flax meal can replace up to 60% of fishmeal in some species diets. Accessing 5% of the global aquaculture feed market at a 5% inclusion would account for 75,000 tonnes of seed or 15% of Saskatchewan production.
- **Pet foods** - The dry pet food market in the U.S. is worth an estimated \$11 billion US; flax can be both a protein and fat substitute in dry pet foods. Manufacturers have increased the proportion of plant-based carbohydrates, fats and proteins in pet foods in recent years.
- **Identity preservation and ecological branding** - Saskatchewan produces flax with a low level of inputs compared to other regions of the world and manufacturing companies have a high opinion of that fact. Forbo, the largest linoleum maker in Europe, has contacted the Flax Council of Canada for data on pesticide usage in flax production.

- **Modified oil profiles** - Traditionally, flax is industrial oil, however, new profiles have created products that have applications in the fry and margarine industry. Solin has an oil profile that has applications in the fry industry.

### **Mustard opportunities**

- **Processing facility** - A dry milling plant would add value to mustard leaving Saskatchewan.
- **Zero erucic acid oriental mustard (ZEM)** - Currently, Japan imports \$2.0 million dollars worth of oriental mustard for use as a condiment. They mill the mustard and retain about half the oil in the flour. The remainder is blended with other low erucic acid oils for cooking, or exported. Processors discount high erucic acid mustard oil; a 5% premium for ZEM would bring an additional \$100,000 to Saskatchewan producers.
- **Identity preservation and ecological branding** - Mustard export markets are very sensitive to GMO contamination; it is possible that we could extract a premium to buyers in European and Asian markets for product that is guaranteed GMO free.
- **Double low *S. alba*** - *S. alba* is very competitive with weeds, has very good pest resistance and seedling vigour; in addition, it does not outcross with canola, these are very important aspects in organic production. Currently, organic farmers have very few options for oilseed crops in their rotations.

### **Sunflower opportunities**

- **Dehulling facility** - Sunflower weighs only 30 pounds per bushel making the transportation of raw product very costly. A dehulling plant may allow producers to economically ship to a crush plant and perhaps allow them to participate in the NuSun market.
- **Early maturing short stature (EMSS) sunflower varieties** - Much of Saskatchewan's production area is too dry, or the growing season is too short for late maturing sunflowers, however, EMSS types can mature in 110 days, opening up a large area for production.
- **NuSun sunflowers** - Producers in the U.S. are switching to the NuSun oil profile (mid oleic) for the frying industry. If we aim to be competitive with sunflowers in the future, we will need to find adapted NuSun varieties.
- **Dairy and beef cattle rations** - Researchers at the University of Saskatchewan's Prairie Feed Resource Centre have shown positive results in feeding studies using whole seed sunflowers. We need to continue this research and increase awareness in feedlots in Saskatchewan. This would create a market for sunflowers that otherwise are costly to transport.

### Special Crop opportunities

Crop	Saskatchewan Production (tonnes)		Export Value (\$ million CAD)	
	1991	2001	1991	2000
Chickpea	0	446,800	0	\$100
Lentil	272,000	576,600	\$95	\$220
Pea	160,600	1,475,100	\$30	\$330
Canaryseed	93,000	79,000	\$25	\$65
Total			\$150	\$715

- The special crops industry has identified the opportunity for special crops to be grown on 20% of cropped land in Saskatchewan by 2010.
  - pea - 3.3M acres from 2.75 million in 2001
  - lentil - 2.0M acres from 1.78 million in 2001
  - chickpea - 2.0M acres from 1.15 million in 2001
  - dry bean - .5 M acres from 5,000 in 2001
  - herb and spice crops – .2 M acres from 30,000 in 2001
  - canary seed - .75 M acres from 300,000 in 2001
  - mustard - .5 M acres from 290,000 in 2001
  - sunflower - .1 M acres from 20,000 in 2001
- If projections were reached it would mean an additional 3 million acres in production from the current 6.3 million acres and result in increased opportunities in the processing sector.
- Diversification of an additional 3 million acres would increase returns from \$726 million in 2001 to \$1.6 billion. It would also serve to expand crop rotation options, reduce summerfallow acres and (in the case of pulse crops) reduce the need for nitrogen fertilizer.
- The main growth opportunities in special crops are in:
  - Dry Bean, Red Lentil, Desi Chickpea
  - Canaryseed – human consumption market
  - Spices – Cumin, industrial uses of coriander, caraway, fenugreek

### Seed Grain opportunities

- There are opportunities to produce seed for larger seed companies or as a member or partner in a private seed company.
- It can be expected that Identity Preserved production for specialized markets will require the use of pedigreed seed. Seed growers have experience with management of IP and segregation of seed varieties.
- The expertise of seed growers in maintaining genetic purity of crops and crop segregation will be in demand for the production and handling of many special trait crops.



- Increased breeding activity will increase seed flow of new varieties, thereby increasing pedigreed seed production and cash flow. Producing pedigreed seed is really a value-added activity.
- Producers who grow higher value crops like canola, flax, malt barley, are the producers most likely to buy pedigreed seed. So promotion of these areas will boost pedigreed acres. Increased pedigreed seed acres will benefit everybody. Currently, pedigreed seed sales are hurt by royalties that go back to the developers. Only the producers buying pedigreed seed are carrying the burden.

### **Organic production opportunities**

- The organic food industry is growing at a rate of 20% per year, suggesting that Saskatchewan could have six million acres in organic production by 2010.
- According to an AAFC study, producers receiving current organic premiums for 100% of their grain sales will increase cash receipts by \$22/acre. Assuming a 20% growth rate in production area, this translates to an **increase in cash receipts by \$91 million for Saskatchewan farmers.**

### **Vegetable opportunities**

- The province produces less than 10% of the total Saskatchewan market for “in season” vegetables. Increasing this to 50% would generate roughly \$50 million in revenue for producers from table potatoes and “in season” vegetables.
- The vegetable sector (including table potatoes) employs 900 full-time and 4,800 seasonal employees. Expansion of seeded area and producers would result in additional jobs in rural Saskatchewan. (Estimated 200 full-time and 1,200 seasonal)

### **Seed Potato opportunities**

- “Northern Vigour” research has proven that Saskatchewan-grown seed potatoes are superior to American-grown seed potatoes when planted in southern locations. This factor along with low disease levels provides an opportunity for steady industry growth. The SSPGA has placed a target of an increase of 500 acres per year, up to a maximum of 20,000 seeded acres. 20,000 acres would bring \$80,000,000 gross sales into the province.

### **Greenhouse production opportunities**

- Due to the competitive advantage of BC’s large greenhouses to market into the high volume, low margin big box market, efforts should be targeted at the opportunity to supply the quality market currently being supplied by Alberta and Manitoba. This production can come from small and medium producers located in rural areas and would serve to create additional rural jobs.
- There is the opportunity to grow the bedding plant and potted crops industry from the current 45 acres to 54 acres by 2010 and increase sales to \$18 million.

- There is an opportunity for a quality bedding plant plug producer to service prairie greenhouse growers. 65% of producers who use plugs do not grow their own. Only 30% of the plugs required are supplied in-province.

### **Nursery sector opportunities**

- An expanding opportunity for the nursery industry in Saskatchewan lies in the production of new hardy trees (especially in the commercial fruit and berry selections) being developed on the prairies for the prairies. There is also a development foreign market for these hybrids.
- There is an opportunity to expand the production and export of liners. Currently two nurseries are exporting. It is estimated that sales can be increased from the current \$75,000 to \$125,000.
- There is an opportunity to expand sales of large calliper trees from \$400,000 to \$1.5 million and shrubs from \$750,000 to \$2 million by 2010.
- The development of an agro-forestry industry in the province will result in a natural expansion of the nursery trades. To plant one acre of land to trees requires 2,700 seedlings and would generate \$2,700 to \$4,000 in sales for a nursery (100 acres \$270,000 to \$400,000).

### **Fruit opportunities**

- There is an opportunity to expand production of most fruit crops to fill local and niche markets for U-Pick, and fresh-picked sales. This includes a number of minor small fruit crops, which mature at various stages of the growing season, which could be harvested in succession. An additional 500 acres, valued at \$2,500,000 is achievable by 2010.
- 1998 SFGA business plan, in one scenario, suggests we would have 1,200 acres of saskatoons by 2010, which would provide 7,200,000 lbs of product, valued at \$7,200,000 to \$10,000,000 depending on whether or not prices remain or drop.
- There is a major opportunity with a new hybrid species of dwarf sour cherry, which was developed at the University of Saskatchewan.
- There are still numerous opportunities in the fruit processing industry. Apples, cherries, raspberries, sea buckthorn, black currants, buffalo currant, grape, etc., for the juice and drink market. Many types of fruits for the cottage wine industry.

### **Herb opportunities**

- The herb industry has identified opportunities for the production and marketing of medicinal and culinary herbs such as sweet basil, *Echinacea angustifolia*, feverfew, valerian, St. John's Wort, burdock, and ginseng valued at \$50 million by 2006.
- Essential oils are derived from volatile aromatic compounds found in plants. The primary markets for essential oils are the flavour and fragrance industries, which

includes soft drink companies, food companies, and perfume companies. Niche markets also exist for essential oils by producing products for aromatherapy.

### **Apiculture opportunities**

- There is room for the industry to double in size, approaching the size of the industry in Alberta, and still not collect all the nectar that is available annually.
- Continued diversification into oilseed and special crops will generate increased demand for bee pollination. Potential for expansion to south with diversification (e.g., canola quality mustard)

### **Wild Rice opportunities**

- The development of an affordable and valid blanket organic certification program for wild rice is essential. Blanket certification of Saskatchewan Lake wild rice will help to distinguish SK product in the marketplace. All of the wild rice produced in the province would be certified organic enabling marketers to concentrate on that segment of the market and distinguish our product from paddy wild rice. This will ensure the current industry is sustainable and provide expansion opportunities if new markets can be developed.

## **4. Environmental Farm Planning**

### **a. Discussion:**

In July 2001 federal, provincial and territorial agriculture ministers agreed in principle on a national action plan to make Canada the world leader in food safety, innovation and environmental protection. The Working Group was given a presentation on the objectives of the action plan, namely:

- Build on Canada's reputation as a producer of safe, high-quality food, by strengthening on-farm food safety systems and securing their international recognition, and through the development of identity-preserving tracking and tracing systems throughout the food chain.
- Enhance the sector's environmental performance through accelerated adoption of sound environmental practices on the farm.
- Improve farmers' ability to manage the inherent risks of farming through safety net programming.
- Use science to help the sector create economic opportunities with innovative new products, and to strengthen environmental stewardship and food safety.
- Renew the sector through programming for farmers that addresses their unique needs and helps them adapt to change.

The focus of the discussion related to the possibility of using this initiative to brand Saskatchewan agriculture products as “green”. The Working Group agreed that on-farm environmental stewardship can improve and that farm planning is important for liability reasons. The Group expressed concern that this could be an additional cost to producers without the opportunity to recoup the cost. The Working Group also emphasized the need for a made in Saskatchewan on-farm environmental planning program and the importance of including producers in its development.

b. Recommendation:

- *That any development of environmental farm plans be developed in consultation with Saskatchewan producers and producer groups and that the program reflect the conditions and environmental priorities of Saskatchewan.*

## 5. Genetically modified Wheat

a. Discussion:

Biotechnology is a powerful science that has applications far beyond genetic engineering (the moving of genes and segments of DNA between unrelated species). It has the ability to positively influence several facets of the agri-food industry.

The first commercial products of biotechnology adopted in North America were input traits. These traits, herbicide and insect tolerance, provided tangible benefits to producers through decreased crop inputs, greater ease of production and the ability to adopt more sustainable methods of crop production such as those reported in the Canola Council of Canada report *Impact of Transgenic Canola on Growers, Industry and the Environment*. Proponents of agriculture biotechnology claim benefits include improved food quality, environmental sustainability, plant varietal development, animal production and assistance towards the self-sufficiency of the least developed countries.

However, agriculture biotechnology (specifically genetically engineered or genetically modified (GM) organisms) commonly encounters criticism and opposition. Those opposed to agriculture biotechnology may base their opposition on one of several factors including: inappropriate risk assessment (i.e. in the past no evidence of risk was acceptable - currently the desire is evidence of no risk); food safety, environmental safety, market loss; and the ownership and control of genetic resources.

The Working Group reviewed developments relating to genetically modified (GM) crops on an international, national and provincial scope. However, the discussion focused on GM and Roundup Ready wheat. While there are benefits to GM canola, the same benefits may not be evident with GM herbicide tolerant wheat. In the case of GM herbicide tolerant wheat there are issues that must be addressed before commercial introduction. These include such factors as appropriate GM detection technology; clear sampling and testing procedures, acceptable identity preservation or segregation procedures and infrastructure, and a long-term marketing plan for GM and non-GM varieties. Given the differing consumer acceptance level, producer acceptance issues and system readiness of each GM crop, each GM crop will have to be reviewed on a case-by-case basis.

If GM wheat technology is introduced without the proper safeguards in place there is the potential to cause farmers economic damage. The reduction in income could be caused by a combination of loss of markets and higher costs because of possible agronomic implications related to the importance of glyphosate in chemical fallow and low disturbance seeding systems.

All premium buyers of Western Canadian wheat have expressed concern about GM wheat to the Canadian Wheat Board. It is evident that when transgenic varieties are introduced some customers will require shipments of wheat and barley that are accompanied by guarantees of either zero, or at least a maximum percentage of transgenic varieties. However, technologies able to efficiently and effectively identify varietal composition of grain shipments are yet to be developed.

The marketing constraints that would be the result of the commercial introduction of GM wheat were discussed. The concern of organic producers in particular were discussed and acknowledged. (The organic industry concern being that organic producer's wheat markets will be jeopardized because of GM wheat contamination.) It was noted that setting tolerance levels of GM wheat in organic wheat are not a solution if the organic market is demanding zero tolerance.

b. Recommendations:

- *The government acknowledge the concerns that some of our wheat customers express in relation to foods and food ingredients that are the result of modern biotechnology and that a market focus is critical to the success of farmers.*
- *The government not support the introduction of GM wheat until market acceptance issues are addressed and technologies capable of identifying and segregating are in place.*

## 6. Trade

The Working Group discussed the importance of trade to Saskatchewan and the need for strong and transparent trade rules was emphasized. It was generally held that Saskatchewan needs to be more involved in understanding trade issues and take a more proactive role in lobbying the federal government and its negotiators in all aspects of trade negotiations that impact upon Saskatchewan and its agriculture industry. The Working Group agreed that the Government of Saskatchewan requires the expertise with sufficient resources to represent the province's interest in trade related issues. The Working Group supports the development of a well-articulated provincial position on trade issues including the issue of trade harassment. Recognizing that international trade is federal jurisdiction, the Working Group supports a Canadian position that requires penalties for parties involved in trade harassment policies and practices where trade harassment is the repeated, unsuccessful challenge of specific Canadian agricultural production, marketing or sector programs.

a) Recommendations:

- *That the provincial government pressure the federal government to develop and implement a strategy, including compensation, to mitigate the impact of trade distorting subsidies on the profitability of the grains and oilseeds sector and related industries.*
- *That the provincial government lead an effort that results in producer groups, industry and other provincial governments coming together in a common effort to impress upon the federal government their responsibility for trade injury compensation.*
- *That the provincial government pressure the federal government to negotiate a WTO agreement that requires penalties for parties involved in trade harassment policies and practices.*

7. **The Canadian Grain Commission**

An independent review of the Canadian Grain Commission (CGC) is being conducted to recommend any changes needed to ensure that the Canadian Grain Commission can continue to be an effective organization given the changes occurring in the grain industry. Concern was raised by the WG that in cases where grain dealers/processors go bankrupt that producers who have made deliveries have very little security in relation to other creditors and are often left without payment. The Working Group discussed the role and responsibility of producers in knowing the system. It was the general belief of the WG that the CGC needs to take a more forceful role in policing the system.

The WG also discussed the need for the report stemming from the CGC review to be made public. Based on the discussion, the WG developed the following recommendations to be included in the final report:

- *That in cases of grain dealer/processor bankruptcy the Government of Saskatchewan recognizes the importance of producer payment for product delivered and therefore urge the Canadian Grain Commission to pursue options that provide protection to producers.*
- *That the Government of Saskatchewan use its influence with the federal government to ensure that the Canadian Grain Commission review panel report and recommendations are made public in a timely fashion.*

## **Appendix I**

### **Grains and Oilseeds Working Group members:**

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