

FEDERAL GOVERNMENT RELIEF PROGRAMS FOR GRAIN FARMERS:

REWARDS FOR THE LATE ADJUSTERS?*

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ABSTRACT

The Canadian Federal Government has introduced several major ad hoc relief programs for Prairie farmers in the last fifty years, in response to various agricultural crises. Each of these programs has rewarded late adjusters -- farmers who contributed to the crises by not responding appropriately to market or environmental conditions. Early adjusters who quickly and innovatively responded have been treated indifferently or penalized by the programs. The 1941 Wheat Acreage Reduction (WAR) program and 1970 Lower Inventory for Tomorrow (LIFT) favoured farmers who grew large acreages of wheat in the preceding years despite high levels of Canadian and world wheat stocks. Farmers who had cut production or diversified received less program money than the late adjusters. The Special Canadian Grains Program (SCGP) of 1986, introduced to offset low world prices in traditional crops, made no payments to special crop producers in its first year. Producers who cultivated below average quality land in a township or who planted traditional rotations regardless of, sometimes in spite of, climatic conditions in 1988 received much of the benefit of the Canadian Crop Drought Assistance Program (CCDAP). The 1989 Permanent Cover Program of the Canada-Saskatchewan Agreement on Soil Conservation will reward, at least in part, late adjusters who brought marginal land under cultivation, some as recently as July 1987, without regard for environmental consequences.

Throughout the last fifty years, the delivery quota system, based on the number of acres farmed, has encouraged extensive farming techniques and the cultivation of marginal land. Farmers who practised annual cultivation of export crops may have maximized short run economic returns given the combined economic and policy signals which were received. Farmers who have tried to farm according to the best long-term agronomic practices have not been rewarded through policy initiatives.

Ad hoc programs which have tried to move producers away from traditional Prairie crops and cultivation methods, especially wheat production, often have been poorly designed, underfunded and limited in scope. Fundamental federal government policies for Prairie agriculture, including the Homestead Act, the Land Survey, and the Crow Rate/Western Grain Transportation Act (WGTA) have

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consistently pushed Prairie land use in a single direction, encouraging annual cultivation and the production of grain, especially wheat, for export at the expense of most other types of agricultural production. A precarious cyclical economy has been one result, especially in Saskatchewan. Deterioration of a significant portion of the land base has been another. The provincial land assessment and property taxation system may have institutionalized this land degradation.

The "Wheat is King" tradition is still alive and well on the Prairies and in the minds of policy planners. Wheat will remain a major crop. However, governments which are serious about diversification in Prairie agriculture must begin to reward early adjusters -- those who innovate and respond appropriately to markets and the physical environment. Federal Government legislation for the Prairie region should be enabling, not disabling legislation.

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INTRODUCTION

The recent Canadian Federal Government blueprint for the future of Canadian agriculture, Growing Together, states in the Ministers' Message that "the [agriculture] industry must be provided with a framework of consistent and predictable government programs..."¹ It goes on to say that market responsiveness, self reliance, regional diversity and environmental sustainability form the context in which a national agricultural policy with coherent programs must be developed.

This paper reviews several federal government relief and development programs and policies, some ad hoc², some long-term, which primarily have been focused on the Western Canadian grain production sector.³ These programs have provided conflicting signals to Prairie farmers about the direction of agricultural development. The result has been that farmers have adjusted late, or not at all, to market and environmental indicators because of inconsistencies between these indicators and national or regional policies. Government policies have often muzzled market signals and farmers wait for the government to take the initiative. The government has often responded slowly and inappropriately, with the rewards going to those who have waited to adjust. The irony is that those who adjust late are often left as well off as those who adjust early.

The policies and programs reviewed in this paper and farmers' responses to them have tended to be firmly in the "Wheat is King" tradition of Prairie, especially Saskatchewan, agricultural development. Most of these programs have reinforced that tradition with both their timing and their payment mechanisms. Elements of these programs which have addressed or questioned this "Wheat is King" tradition have been small in scale, transitory in nature, inconsistent with overall policy direction and, therefore, unable to alter the foundations of Prairie agriculture. Figure 1 presents "A Concise Pictorial History of Policy Intervention in Saskatchewan Agriculture" in cartoon form.

The Canadian Crop Drought Assistance Program (CCDAP, 1988) and the Special Canadian Grains Program (SCGP, 1986) were introduced by the Canadian Federal

¹Agriculture Canada. Growing Together: A Vision for Canada's Agri-Food Industry. 1989, pp. 2-3.

²ad hoc: ¹"for the particular end or purpose at hand and without reference to wider application or employment"; ²"made, established, acting, or concerned with a particular end or purpose". Webster's Third New International Dictionary (unabridged). Springfield, Mass., G. and C. Merriam Company, 1976, p.27.

³This paper does not suggest that the Canadian livestock sector has had no program intervention. The Agricultural Stabilization Act, Tripartite Stabilization, PFRA grazing lands, drought payments to livestock producers and a Meat Import Law are a few readily available examples. No direct comparisons are made between grain programs and livestock programs as this is beyond the scope of the paper.

Government to assist farmers through difficult periods of drought and poor prices, respectively. In common with two previous major relief programs, Lower Inventory for Tomorrow (LIFT, 1970) program and the Wheat Acreage Reduction (WAR, 1941), CCDAP and SCGP rewarded late adjusters and were indifferent to, or even penalized, early adjusters.⁴ The Permanent Cover Program (PCP) of the 1989 Canada-Saskatchewan Agreement on Soil Conservation will also reward those who have delayed their adjustment, this time to the long-term environmental problem of "soil deterioration on high risk lands presently in annual cultivation."⁵

The above five agricultural programs are analyzed for their implications for early and late adjusters. Each program was ad hoc, introduced as a temporary measure in response to a period of distress (primarily in Prairie agriculture) caused by either poor market or environmental conditions. Just as some farmers were late adjusters to the problems, the programs themselves, by targeting the health of the grain export economy, may have been late and inappropriate government interventions in a longer term framework. Throughout the coming and going of these ad hoc programs, the delivery quota system has, in its various forms, been a major determinant of how producers adjust to market and environmental signals in their land use and methods of farming.

After reviewing the ad hoc programs, it is obvious they were largely directed to the Prairie grain export community and, in many ways, are consistent with 20th century Prairie land use based on the Homestead Act, the Land Survey, the Crow Rate/Western Grain Transportation Act and other major ongoing federal agricultural policies. This paper goes on to briefly review these fundamental programs, and the land assessment and property taxation system of Saskatchewan. It asks the basic question: Are cereal grain exports the long-run comparative advantage of Saskatchewan from an economic and an environmental perspective? To be more direct, what are the long-run economics and environmental implications of maintaining a monoculture system to produce a product worth 6 cents a pound which must be moved halfway around the world to reach markets?

Part I of the paper reviews the ad hoc programs and the delivery quota system. Part II examines some historical and ongoing programs which support current land use practices underlying the wheat-for-export economy, and asks if these programs are economically or environmentally sustainable. Has policy intervention been part of the solution or part of the problem? The paper concludes with suggestions for future policies and programs.

⁴Late adjusters, for the purposes of this paper, include those farmers who continue to grow crops or use agronomic practices that contribute to recognized agricultural problems. They are hesitant to change their crop mix or methods of farming in response to market or environmental signals. Instead, they usually wait for the government to give them the lead through various programs and payments. Early adjusters are farmers who perceive problems either in markets or the physical environment, and respond by altering their enterprises or by changing their agronomic practices. Their operations change independently of anticipated assistance from government programs.

⁵PFRA Brochure. Agreement on Soil Conservation: Permanent Cover Program, 1989, p. 1.

I. Ad Hoc Programs

A. Wheat Acreage Reduction (WAR) 1941

A combination of generally good wheat crops and low demand worldwide created a large international surplus of wheat during the late 1930's. Canada, however, experienced extremely poor wheat yields in this period. Then, in 1939 and 1940, Canada produced very large wheat crops (Table 1). At the same time German occupation of much of Europe cut off most of Canada's major wheat markets. The net effect was a buildup of stocks in Canada (Table 2).

The Canadian government introduced two major programs in response to this situation. The first initiative, in the fall of 1940, was the introduction of delivery quotas to regulate the flow of grain to market. This program is briefly examined to illustrate a policy that did not unduly benefit late adjusters.⁶

Quota acres were established on the basis of 1940 seeded acres. Wheat, oats and barley were the only crops under quota, and quota delivery privileges were not interchangeable between crops or between producers. Initial quotas for the grains were set at five bushels per seeded acre. Perhaps inadvertently, wheat was given preferential treatment because a bushel of wheat is worth more than a bushel of oats or barley, so the wheat quota was much more valuable. The result was, if 100 acres were seeded to each crop, the 500 bushels of wheat quota was worth \$265, oats \$105 and barley \$135.⁷ Quotas were lifted because of rising demand soon after the crop year began.

In the second year, 1941-42, an effort was made to discourage wheat production and increase coarse grain production through the manner in which the quotas were set up. The delivery base for wheat, called the Authorized Wheat Area, was 65 percent of an individual producer's 1940 wheat acreage. Adjustments were made for producers who had either an abnormally high or low, proportion of their farms in wheat in 1940.⁸ The calculation of quota acres for 1941 gave some advantage to those farmers who grew only a few acres of wheat in 1940 and lightly

⁶The Diefenbaker acreage payment program (1958-60) which paid a flat payment of \$1 per cultivated acre to farmers may not have unduly benefitted late adjusters. It did tend to reward low quality land and areas where summerfallow was an important agronomic practice. However, it was neutral to choice of crops. The Two Price Wheat Program also made acreage payments for a short period in the early 1970's.

⁷The average farm prices for spring wheat, oats and barley were 53 cents, 21 cents and 27 cents per bushel respectively in 1940-41 in Saskatchewan. Dominion Bureau of Statistics, 22-002. Quarterly Bulletin of Agricultural Statistics, January - March, 1942, Table 1, p. 23).

⁸Charles F. Wilson, Grain Marketing in Canada, 1979, page 233.

Table 1: World and Canadian Wheat Production, 1927-42

Year	All Commercially Producing Countries	Canada
-----Bushels-----		
1927	4,509,106,477	479,665,000
1928	4,845,026,484	566,726,000
1929	4,295,927,295	304,520,000
1930	4,851,582,431	420,672,000
1931	5,420,370,256	321,325,000
1932	5,473,164,275	443,061,000
1933	5,704,331,430	281,892,000
1934	5,499,013,561	275,849,000
1935	5,565,863,749	281,935,000
1936	5,598,244,699	219,218,000
1937	6,152,343,327	180,210,000
1938	6,724,570,000	360,010,000
1939	6,279,270,000	520,623,000
1940	---	540,190,000
1941	---	314,825,000
1942	---	556,684,000

Source: Dominion Bureau of Statistics, 22-201, Report on the Grain Trade of Canada, 1931-1943. Table: "Wheat Production by Countries" various pages, Table: Acreage, Yield and Production in Canada", various pages.

Table 2: Total Carryover of Canadian Wheat in Canada and the United States, 1935-1942.

--Bushels--	
August 1, 1935	213,852,118
1936	127,362,598
1937	36,850,700
1938	24,535,858
1939	102,161,568
1940	300,473,465
1941	480,129,311
1942	423,752,337

Sources: Dominion Bureau of Statistics (DBS), 22-201, Report of Grain Trade of Canada, 1942-43, p. 38, DBS, Monthly Review of the Wheat Situation, Vol. 12, No. 12, August 21, 1942, p. 32.

penalized farmers who sowed a large acreage to wheat in 1940.⁹ This adjustment provision for revising abnormally high acreages downwards in the calculation of the Authorized Wheat Area appears to have been some reward for early adjusters and some penalty for late adjusters.

The second initiative, in the crop year 1941-42, was the Wheat Acreage Reduction program. This program paid farmers a specified amount per acre to switch land from wheat to summerfallow, coarse grains or grass. The payment was made on the reduction of wheat acres in 1941 from wheat acres sown in 1939 or 1940. Again adjustments were made if wheat acres were unusually high or low in 1940.

To illustrate the payment mechanism, three hypothetical farms with the same amount of acres (600 acres cultivated, 100 acres pasture) but a different crop mix, are analyzed in Table 3. Farmer A practised a 50-50 wheat-fallow rotation in 1939. In 1940, good soil moisture levels encouraged him to plant two-thirds of his cultivated land to wheat. Farmer B grew large acreages of wheat in both 1939 and 1940. He even broke 100 acres of pasture in 1940 in preparation for planting wheat. Farmer C saw, in the spring of 1939, the wheat carryover building up and decided not to grow much wheat, but to concentrate on other crops. In 1940, he saw a further buildup of wheat stocks and decided not to grow wheat at all.

In 1941, all three farmers decided to take one-half of their 1940 computed wheat acreage out of production and put it into summerfallow. There was a payment of \$4 for each acre transferred from wheat to summerfallow. Only \$2/acre was immediately paid for wheat acres switched to coarse grains or grass, with another \$2 paid if the land was still in coarse grains or grass in July, 1942.

As illustrated by the above example, farmers who contributed to the wheat glut by sowing most of their acres to wheat in 1939 and 1940 were rewarded by the government more than farmers who diversified their crop base in 1939 and 1940. It paid to maximize wheat production prior to the Canadian implementation of the Wheat Acreage Reduction program. Farmer B received a \$1,120 payment and Farmer A received a \$720 payment, while the early adjuster, Farmer C, received only \$200.¹⁰

⁹Adjustments were made for those producers who grew large acreages of wheat in 1940, by comparing their wheat acreage to those of other farmers in their district. If their acreage was abnormally high it was adjusted downwards. For those producers who grew little or no wheat in 1940, the Authorized Wheat Area was increased on an individual basis. We were unable to calculate exact adjustments because the information was unavailable in the sources we used (Canadian Wheat Board Circulars 195, April 28, 1941 and 200, April 3, 1941).

¹⁰This example may not be indicative of the mix of crops grown on the Prairies during this period. It is chosen to illustrate the weakness of the program.

Table 3: Three Calculations of Wheat Acreage Reduction Payments (WAR, 1941)

-----Acres-----

Farmer A:

	<u>Actual 1939</u>	<u>Actual 1940</u>	<u>Computed 1940</u>	<u>Actual 1941</u>
Wheat	300	400	360 ¹	180
Coarse Grains	-	-	-	-
<u>Summerfallow</u>	<u>300</u>	<u>200</u>	<u>240</u>	<u>420</u>
Total Cultivated	600	600	600	600
<u>Pasture</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Total	700	700	700	700

Calculation for WAR:

1/2 of computed 1940 wheat acreage taken out of production

WAR = 180 acres

180 x \$4.00/acre = \$720.00

Farmer B:

	<u>Actual 1939</u>	<u>Actual 1940</u>	<u>Computed 1940</u>	<u>Actual 1941</u>
Wheat	500	500 ²	560 ³	280
Coarse Grains	0	0	20 ⁵	20
<u>Summerfallow</u>	<u>100</u>	<u>100</u>	<u>120⁴</u>	<u>400</u>
Total Cultivated	600	600	700	700
<u>Pasture</u>	<u>100</u>	<u>100</u> (Broken) ⁵	<u>0</u>	<u>0</u>
Total	700	700	700	700

1/2 of computed 1940 wheat acreage taken out of production

WAR = 280 acres

280 x \$4.00/acre = \$1,120.00

Farmer C:

	<u>Actual 1939</u>	<u>Actual 1940</u>	<u>Computed 1940</u>	<u>Actual 1941</u>
Wheat	100	0	100 ⁶	50
Coarse Grains	200	300	250	250
<u>Summerfallow</u>	<u>300</u>	<u>300</u>	<u>250</u>	<u>300</u>
Total Cultivated	600	600	600	600
<u>Pasture</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Total	700	700	700	700

1/2 of computed 1940 wheat acreage taken out of production

WAR = 50 acres

50 x \$4.00/acre = \$200.00

Continued

Table 3: Continued

¹ The 1940 computed wheat acreage from which the wheat acreage reduction was calculated was the average of the 1939 and 1940 wheat acreages. If that average fell below 60% of 1940 cultivated acres (as in Farm A above), the larger of the wheat acreages in 1939 and 1940 was used up to 60% of 1940 cultivated acres.

² In 1940 there was a record wheat acreage in the Prairie Provinces. Some individual farmers planted abnormally large acreages.

³ Any farmer who had 80% or more of cultivated acreage in wheat in 1939 and 1940 could claim 80% of 1940 cultivated acreage as computed 1940 wheat acreage (480 acres in this case). As explained in (5) below, 80% of newly broken land was then added to this wheat acreage (480 + 80 = 560).

⁴ The computed 1940 summerfallow and coarse grains acreages had to be increased or decreased in the proportion they were actually grown in 1940 by the decrease or increase in computed 1940 wheat acreage over actual 1940 wheat acreage.

⁵ Any land newly broken in 1940 had 80% included in computed 1940 wheat acreage and 20% included in 1940 computed coarse grain acreage.

⁶ Because Farmer C grew no wheat in 1940, he was allowed to use his 1939 wheat acreage as his computed 1940 wheat acreage, up to 60% of 1940 total cultivated acres.

Source: The examples and notes are developed from the authors' interpretation of Order in Council, P.C. 3047, "Payments in Respect of Wheat Acreage Reduction", The Canada Gazette, October 18, 1941, pp. 1248 - 1251.

A further monetary benefit to wheat farmers at this time was the Canadian Wheat Board's (CWB) Farm Storage Payment Program. During the periods from October 8, 1940 to July 31, 1941 and from October 8, 1941 to July 31, 1942, the CWB paid farmers 1/45 of a cent/bushel/day for the cost of storing wheat on the farm. This payment was for all grades of wheat delivered between November 1 and July 31 of each of the above crop years. The CWB paid farmers \$6,796,174 during the duration of this program.¹¹ As a reference point, cumulative realized net farm income in the three Prairie provinces in 1941 and 1942 was about \$500,000,000.¹²

¹¹Canadian Wheat Board, Annual Reports, 1940-41, p. 9 and 1941-42, p. 6.

¹² Dominion Bureau of Statistics, 21-502, Handbook of Agricultural Statistics, Part II, 1926-57, pp. 32 - 34.

B. Lower Inventory for Tomorrow (LIFT) 1970

Surplus wheat stocks occurred again on the Prairies in the late 1960's (Table 4). In response to this situation, the federal government, in 1970, introduced Operation LIFT (Lower Inventory for Tomorrow).

Under the LIFT program a payment was made to every permit book holder who reduced wheat acreage in 1970 from wheat acreage sown in 1969. A producer received the full acreage payment if he had "increased the sum of his summerfallow and perennial forage acreage by an amount equal to that removed from wheat."¹³ There were special provisions made for those farmers who grew

Table 4: Total Carryover of Canadian Wheat in Canada and the U.S., 1966-72.

	Bushels
July 31, 1966	420,122,308
1967	571,750,535
1968	672,509,981
1969	851,828,399
1970	1,008,690,000
1971	734,154,000
1972	583,757,000

Source: Dominion Bureau of Statistics, 22-201, Report of the Grain Trade of Canada, 1972-73, p. 81.

less than 100 acres of wheat or had an excess number of acres in summerfallow (more than 50% of cultivated land) in 1969. Farmers were paid \$6.00/acre if wheat acres were put into summerfallow or perennial forage with a further \$4.00 paid per acre of new perennial forage if it remained planted in July, 1971. Each producer could withdraw wheat acres up to a maximum of 1000 acres.

Three hypothetical farms are again examined to illustrate the payment mechanism. Table 5 shows the cropping changes made by each farmer under LIFT and calculates each LIFT payment. Farmer A decided to plant a large proportion of his farm's cultivated acres to wheat in 1969. Farmer B and C saw the buildup of wheat stocks and decided to grow only a few acres of wheat in 1969. They switched acreage from wheat to either summerfallow or coarse grains and oilseeds.

Farmer A, who continued to contribute to the evident wheat surplus by planting a large acreage of wheat in 1969, received the largest government

¹³Canadian Department of Agriculture, Canada Agriculture, Spring 1970, page 1 of insert.

Table 5: Three Calculations of LIFT Payments (1970)

	-----Acres-----							
	<u>Farmer A</u>		<u>Farmer B</u>			<u>Farmer C</u>		
	<u>1969</u>	<u>1970</u>	<u>Actual</u>	<u>For Lift</u>				
			<u>1969</u>	<u>Purposes</u>	<u>1970</u>	<u>1969</u>	<u>1970</u>	
				<u>1969</u>	<u>1970</u>			
Wheat	1500	500	100	300 ¹	0	100	0	
Coarse Grains and Oilseeds	-	-	700	700	700	1100	1100	
Summerfallow	500	1400	1200	1000	1000 ²	800	800	
Perennial Forage	-	100	-		300	-	100	
Total Acres	2000	2000	2000	2000	2000	2000	2000	
Farmer A - 1000 acre reduction in wheat								
900 acre increase in summerfallow x \$6.00/acre =								\$5,400
100 acre increase in perennial forage x \$10.00/acre =								<u>\$1,000</u>
								Total \$6,400
Farmer B - 300 acre reduction in wheat								
300 acre increase in perennial forage X \$10.00/acre =								\$3,000
Farmer C - 100 acre reduction in wheat								
100 acre increase in perennial forage x \$10.00/acre =								\$1,000

¹ If a producer in 1969 summerfallowed more than 50% of his cultivated acres, the excess summerfallow acres (above 50%) were considered 1969 wheat acres. Wheat acres were increased by that amount (200 acres for Farm B above) and summerfallow acres decreased by that amount, for the purpose of the LIFT payment calculation.

² According to the LIFT calculations, Farmer B summerfallowed 1000 acres in 1969 and 1970 (50% of his cultivated acres each year). In reality, he had excess summerfallow in 1969 as an adjustment to the wheat surplus and was forced to double summerfallow some land in 1970 (200 acres in this case) to receive the full LIFT payment. This is usually not considered a desirable agronomic practice, but could and did happen in some cases. The principal author has personal knowledge of producers who did double summerfallow. LIFT was designed to discourage wheat farmers from moving into coarse grains and oilseeds (to prevent instability in those markets) and to increase acreage in summerfallow and perennial forage. (See "Operation Lift" Statement by the Honourable Otto E. Lang to the House of Commons, February 27, 1970, pp. 1-2.

Source: The examples and notes are developed from the authors' interpretation of Appropriation Act No. 1, 1970, "Wheat Inventory Reduction Regulations", The Canada Gazette, Part II, May 13, 1970, pp. 467-470.

payment because he was able to withdraw the maximum 1000 acres from wheat production. It is interesting to note that Farmer A could have increased his LIFT payment if he had been willing to plant more perennial forage. However, the full \$10 payment per acre for perennial forage was conditional on keeping it in forage until July 15, 1971. Farmers B and C were penalized by LIFT for their attempts to deal on an individual basis with the wheat glut by diversifying.

A new quota policy partially offset the bias of the payment system used in the LIFT program. Any acres seeded to wheat in 1970 did not qualify for quota. Quota acres assignable to wheat in 1970 were equal to the number of acres in summerfallow in 1970, the net increase in perennial forage crops in 1970 over 1969, plus 25 percent of the acres in summerfallow in 1969.¹⁴ As a result, Farmer A had 1,625 quota acres, Farmer B 1,600 quota acres and Farmer C, 1,100 quota acres available for assignment to wheat deliveries. For crops other than wheat, farmers received the actual acreage seeded to each crop as their quota delivery base for that crop. Farmers B and C, respectively, had totals of 700 and 1,100 quota acres for coarse grains and oilseeds. In addition, all three farmers could use their assignable quota acres for wheat deliveries or to increase the delivery of any other quota grain.

C. Special Canadian Grains Program (SCGP) 1986

In 1986, the federal government agreed to pay a one billion dollar deficiency payment to grain farmers across Canada. This program was initiated in response to low grain prices caused by the subsidy war, primarily in wheat, between the European Community (EC) and the United States. There have been a number of criticisms of the program, but this paper will only consider the failure to include a broader range of crops in the initial year.¹⁵

SCGP was announced as a one time payment in December, 1986. Subsequently the program was extended and enlarged in 1987. Initially only certain crops were included. They were wheat (including durum), oats, barley, rapeseed, rye, flax, corn, soybeans, mixed grains and sunflowers. Lentils, peas, mustard, canaryseed and other special crops were excluded. The payment was "calculated on the basis of farmers' seeded acreage of grains and oilseeds, and on representative regional yields derived from crop insurance data. Assistance rates for each commodity are proportional to their relative price decline attributable to the trade

¹⁴ The formula also included only a 25 percent factor for newly broken land, and a reduction in assignable quota acres if perennial forage was broken up. However, neither of these factors apply to the selected examples provided. (Wilson, p. 241 and 242).

¹⁵A second problem with SCGP was the use of regional average yields to calculate SCGP payments. This averaging of yield generated an income transfer from producers with high-quality cultivated land to producers with low-quality cultivated land. This is further explained in the next section of the paper. The income transfer mechanism which favours the cultivation of marginal land is essentially the same for both SCGP and CCDAP.

war."¹⁶ The payment to each farmer was limited to \$25,000.

Two hypothetical farms with the same number of cultivated acres and in the same crop insurance area are analyzed to illustrate the payment mechanism. Farmer A had tried to diversify his crop mix over the previous few years by planting a large number of acres to special crops. Farmer B continued to seed the traditional crops. Their cropping mix and the calculation of the payment from the government for 1986 is shown in Table 6.

Table 6: Two Calculations of SCGP Payments (1986)

	(1a) Farmer A (acres)	(1b) Farmer B (acres)	(2) Regional Yield (bu/acre)	(3) SCGP Assistance Rate (\$/bu.)
Wheat	600	1200	30	.4629
Barley	-	300	42	.2674
Lentils	300	-	-	-
Peas	200	-	-	-
Canaryseed	400	-	-	-
Summerfallow	500	500	-	-
Total Cultivated	2000	2000		

Payment Formula - Column 1 X Column 2 X Column 3 = SCGP payment

Farmer A - $600 \times 30 \times \$0.4629 = \$8,332.20$

Farmer B - $1200 \times 30 \times \$0.4629 = \$16,664.40$

- $300 \times 42 \times \$0.2674 = \$3,369.24$

\$20,033.64

Source: Examples developed from the authors' interpretation of various Agriculture Canada printed materials on the Special Canadian Grains Program.

Results from Table 6 show that Farmer A received about \$8,332 and Farmer B received about \$20,034 from the government. Farmer A, who tried to reduce his acreage of traditional crops, received less money for being innovative. Farmer B stayed with the traditional crops and was rewarded handsomely. One

¹⁶Agriculture Canada, Communication Branch News Release, Special Canadian Grains Program, Ottawa: December 9, 1986, p. 2.

might argue that special crop prices were not affected by the trade war, and if special crop producers in Western Canada were to be rewarded, all special crop producers in Canada, including potato farmers in Prince Edward Island, should have been paid. However, special crop prices in Western Canada were affected by the trade war. As international prices for traditional grains dropped, farmers seeded more acres to special crops, thus driving down their price. The substitutability of the input mix and the specialized machinery enables an easy shift from wheat to canaryseed or mustard. Growing potatoes, on the other hand, requires a different implement mix.

To be fair to the designers of the SCGP, special crops including mustard, dry peas, lentils, canaryseed, safflower, buckwheat, fababeans, triticale and dry beans were included in the second year of the program. It was recognized by then that the trade war was affecting more than traditional grain and oilseed producers.

D. Canadian Crop Drought Assistance Program (CCDAP) 1988

CCDAP was a response to a different set of problems than the three programs discussed above. Instead of addressing market difficulties facing Prairie farmers, CCDAP was a drought relief program. Despite the apparently straightforward rationale for this program, the assistance was skewed in favour of farmers who cultivated the lowest quality land in drought-affected townships and those who ignored the low soil moisture levels in the spring of 1988, and planted "as usual".

CCDAP made crop-specific acreage payments which took into account crop losses from drought, normal yields, 1988-89 farmgate prices, and crop insurance support, all at the township level.¹⁷ Table 7 examines the hypothetical cases of two farmers in the same township who received payments based on township average data, compared to the payments they might have received if individual farm data were used for target revenues, actual yields, crop insurance payments received and farmgate prices.

The method of paying on township averages generated a transfer payment from farmers with good land to farmers with poor land, under most reasonable sets of relative yield assumptions. In the example shown, Farmer A, who had high long-term average yields, received the same CCDAP payments per acre as Farmer B who, historically, had a much lower long-term average yield. If individual data had been used to determine the payments, Farmer A would have received a higher payment per acre.

Table 8 calculates the gross returns of two farmers on land of different quality within a township. The example assumes only two farmers of equal acreage occupy the township. Farmer A is on higher quality land with a 30 bu. per acre long term average wheat yield. Farmer B, on lower quality land, has a 20 bu. per acre long term yield. Both are assumed to be at the entry level of crop

¹⁷Agriculture Canada, Agriculture Development Branch, various printed materials distributed to Rural Municipality Administrators, 1989.

Table 7: The Calculation of CCDAP Payments (1988)

	Actual Payments Farmer A and B Based on Township Averages	Hypothetical Payments if Individual Data Used	
		Farmer A	Farmer B
Long-term Average Yield (wheat bu./acre)	25	30	20
1988 Farmgate Price (wheat, \$/bu.)	\$4.35	\$4.35	\$4.35
a) Target Revenues/acre ¹	$.7775 \times 25 \times 4.35$ = \$84.55	$.7775 \times 30 \times 4.35$ = \$101.46	$.7775 \times 20 \times 4.35$ = \$67.64
1988 average yield (bu./acre)	7	8	6
b) Market Returns/acre ²	$7 \times \$4.35$ = \$30.45	$8 \times \$4.35$ = \$34.80	$6 \times \$4.35$ = \$26.10
1988 crop insurance value (wheat \$/bu.)	\$2.99	\$2.99	\$2.99
c) Crop Insurance ³ Returns/acre	$[\ .7(25) - 7] \times \$2.99$ = \$31.40	$[\ .7(30) - 8] \times 2.99$ = \$38.87	$[\ .7(20) - 6] \times 2.99$ = \$23.92
	<u>Actual</u>	<u>If based on individual data</u>	
d) CCDAP Payment/acre a-b-c=d	\$22.70/acre	\$27.79/acre	\$17.62/acre
e) Total CCDAP Payment if 700 cropped acres/farm	\$15,890.00	\$19,453.00	\$12,334.00

¹ Target Revenues/acre equal 77 3/4 percent of long-term average yield x farmgate price.

² Market Returns/acre equal 1988 average yield x farmgate price.

³ Crop Insurance Returns/acre equal [(70 percent of long term average yield) - 1988 average yield] x 1988 crop insurance value/bushel.

Source: Developed from the authors' interpretation of various Agriculture Canada printed materials on the Canadian Crop Drought Assistance Program.

Table 8: A Simplified Comparison of Gross Farmer Returns Under Alternative Yield Assumptions Including CCDAP Payments in 1988.¹

FARMER A ²					
Yield (bu/acre)	6	7	9	11	12
Market Returns/acre ³	26.10	30.45	39.15	47.85	52.20
Crop Insurance ⁴	44.85	41.86	35.88	29.90	26.91
CCDAP Payment ²	22.70	22.70	22.70	22.70	22.70
A. Gross Returns	93.65	95.01	97.73	100.45	101.81
FARMER B ²					
Yield (bu/acre)	8	7	5	3	2
Market Returns/acre ³	34.80	30.45	21.75	13.05	8.70
Crop Insurance ⁴	17.94	20.93	26.91	32.89	35.88
CCDAP Payment ²	22.70	22.70	22.70	22.70	22.70
B. Gross Returns	75.44	74.08	71.36	68.64	67.28
B as a Percent of A	80.56	77.97	73.02	68.33	66.08

¹The assumptions are Farmer A and Farmer B have a cropped acreage of equal size and are in the same township. Both crop wheat only on a half-half rotation. Farmer A has class B, C, and D soils and a long-term rated crop insurance yield for the farm of 30.0 bushels per acre. Farmer B has class L and M soils and a long-term rated crop insurance yield for the farm of 20.0 bushels per acre. Both are good managers and achieve yields identical to the crop insurance rated yield. These land ratings are from risk area 12, 1988.

²This table complements Table 7 and provides alternative yields on Farm A and Farm B to generate an average township yield of 7 bushels/acre. The CCDAP payment from Table 7 is \$22.70/acre for both farms.

³Market Returns/acre equal 1988 average yield and farmgate price (\$4.35/bushel).

⁴Crop Insurance Returns/acre equal [(70 percent of long-term average yield) - 1988 average yield] x 1988 crop insurance value/bushel (\$2.99/bushel).

Sources: Developed from the authors' interpretation of various Agriculture Canada printed materials on the Canadian Crop Drought Assistance Program; and Agriculture Canada and Saskatchewan Crop Insurance Corporation. Canada/Saskatchewan Crop Insurance Premium Tables, 1988.

insurance coverage (i.e. no coverage adjustment for either farmer). Both are assumed to have equal management skills. Based on long term average yields, the gross income of Farmer B is expected to be 66.67 percent of the gross income of Farmer A (20 bu./acre yield vs 30 bu./acre yield). The yield distributions in the township are examined at different levels, with Farmer A's yields ranging from 6 bu. to 12 bu./acre. Consequently, Farmer B's yields range from 8 bu. to 2 bu./acre so the township average yield remains at 7 bushels per acre. Farmer B receives more than 66.67 percent of the gross returns of Farmer A for all the relative yields, except where Farmer A produces 12 bu./acre and Farmer B, 2 bu./acre. With the relative yields of 12 bushels for Farmer A and 2 bushels for Farmer B, Farmer B would not be required to combine the crop, while Farmer A would have harvesting expenses. Therefore, under any conceivable yield alternatives, Farmer A does not achieve his historical relative advantage in long-term gross income when compared to Farmer B. This is due to the nature of the CCDAP program which favoured those producers who cultivated low quality marginal land within a township. This program is not consistent with crop insurance which seeks to achieve similar proportions of normal yield, such as 60 percent or 70 percent coverage options.

It may be inappropriate to credit a producer with being an early adjuster based on the quality of his land. However, the farmer who brought marginal land into production, and kept it in production in spite of low returns to cropping and negative climatic and environmental indications, appears to be a late adjuster. CCDAP ensured that marginal land with low long-term average yields achieved the same target revenue per acre as good land with higher long-term average yields if the two parcels were in the same township. The fact that two pieces of land are in the same township is a result of the survey system and may bear little relation to soil type, quality, yield expectation, geography or the best long-run use of the land.

Producers who correctly anticipated a drought based on their spring moisture conditions, and took a larger than average percentage of land out of production, had to make some extra efforts to secure CCDAP payments for their excess summerfallow. They also waited a longer time to receive their money. To be fair to the designers of the program, coverage for excess summerfallow was included in the initial program announcement. Other farmers who used (often) marginal land to produce hay and commercial forage seed were denied payments under CCDAP. This certainly emphasized the federal government's long-term bias toward the annual cultivation of the majority of Prairie land, including the marginal land, as the basis of a Western Canadian grain economy.

E. Permanent Cover Program (PCP) 1989

The PFRA-administered Permanent Cover Program of the Canada-Saskatchewan Agreement on Soil Conservation is the first significant federal government program in many years to take large tracts of marginal land out of cultivation on the Prairies. Among the programs discussed above, only WAR and LIFT addressed the issue of annual cultivation versus perennial crops or grasslands. In both of the above programs, "perennial" forage had to remain on the designated acres for at least one-and-a-half seasons -- hardly a permanent shift in the use of land resources.

The Permanent Cover Program provides a direct financial incentive to remove marginal lands from cultivation (for a prolonged period) and, as such, is an appropriate response to the problem of soil deterioration on high risk lands. However, there are some issues surrounding the program that need to be examined.

To quote from the PFRA brochure: "The purpose of the Permanent Cover Program is to reduce soil deterioration on high risk lands presently in annual cultivation. These lands are not suited for growing annual crops and should be permanently converted to forage and/or tree cover."¹⁸

The identification and proper management of high risk land is an activity that the PFRA has been involved in for more than 50 years and most high risk land has been identified for many years. However, the PCP will benefit many late adjusters to environmental problems who have cultivated unsuitable land in recent years. The extreme example would be the farmer who broke marginal land in the spring of 1987 (the latest allowed under the PCP), despite the variable weather and grain market conditions of the mid-1980's. Those who may have converted their marginal land to environmentally-suitable uses on their own initiative in past years, or did not break it at all, will receive no benefit under the PCP program.¹⁹

In addition, the time periods referred to as permanent (10 years or 21 years) under the PCP do not approach permanency or even, perhaps, the long-term. It is possible that late adjusters will again receive benefits from government programs in 15 to 25 years as the marginal land which entered PCP is returned to cultivation.

Of course, the PFRA cannot necessarily be faulted for the inadequacies of the PCP. Many PFRA programs of the past have been inadequately funded or neglected due to good weather or attractive grain prices (shelterbelt planting for example). The ad hoc nature and relatively small funding level of the PCP are the major factors that reduce the prospects for long-term impact on the Prairie agricultural industry and the environment. The program is only in place for three years and there is no assurance that it will be renewed. This program appears to be underfunded as it was oversubscribed within the first few months of operation.

A comparison of another ongoing federal program (WGTA) with the PCP indicates their relative magnitudes. Table 9 illustrates the federal government payments made to the railroads for grain transportation under the WGTA for 1984-87. Similar payments under WGTA continue to be made annually. The Permanent Cover Program, in contrast to the dollar figures in Table 9, totals (over three

¹⁸PFRA brochure. Agreement on Soil Conservation: Permanent Cover Program. 1989, p. 1.

¹⁹As one author commented, "Thank God for the cowboys!"

Table 9: Yearly Western Grain Transportation Act Payments
 Made by the Canadian Transport Commission to the
 Railroads, 1984-87 Calendar Year in Canadian Dollars

Year	Payment
1984	589,775,786.60
1985	496,019,162.47
1986	671,135,837.88
1987	942,061,143.02
TOTAL	2,698,986,940.97

Source: 1984-86 Data, Canadian Transport Commission Annual Reports,
 1984-86.
 1987 Data, Conversation with Len Hennessey of the
 Canadian Transport Commission (Ottawa), January, 1988.

Compiled originally for a study of the opportunities and constraints to wheat processing in Saskatchewan prepared for Agriculture Canada and Saskatchewan Agriculture, (Ken Rosaasen and Ron Eley portion).

years) about 20.6 million dollars for the Prairie provinces.²⁰ If another 29.6 million dollars (approximately) in federal money is added to this amount for various other conservation programs administered by PFRA, such as Save Our Soils in Saskatchewan and the Manitoba On-Farm Program, the total is still only about 50.2 million dollars over three years.²¹ The significance of ongoing programs such as WGTA, which subsidizes the transportation of grain by rail from the Prairies, in determining the direction of Western Canadian agricultural development is obvious. The late adjusters, as defined by this paper, have been responding appropriately in a short term economic sense if the most powerful signals given them arise from government regulations. Market signals have been muzzled.

F. Delivery Quota System

The use of a delivery quota system for grains since 1940 has had a profound effect on the development of Western Canadian agriculture. Quota policy originally limited grain delivery per cultivated and/or seeded acre of land in

²⁰Saskatchewan, \$10.5 million; Alberta, \$8.2 million; and Manitoba, \$1.9 million (the Manitoba amount is an estimate, since it is combined with another payment). PFRA, Regina.

²¹Conversations with PFRA officials, February, 1990.

an attempt to offer equitable delivery opportunities to all producers. As the system has evolved, this objective has at times remained primary. At other times, coordinating throughput to increase transport and handling capacity has been a dominant objective of the Canadian Wheat Board in administering the delivery quota system.²²

For producers, the quota policy has been an incentive to increase the number of cultivated acres, since access to more delivery opportunities has remained their major quota concern. Marginal land has been brought into production, and technology has been adopted that permits extensive rather than intensive land use. The quota policy has not been conducive to increased land productivity.²³

Producers have not been encouraged to diversify their crop mix since they need to keep a high level of quota grain acres to receive adequate delivery quota in some years. During most of the 1970's, the quota system allowed equal delivery opportunities for each quota acre of a specific crop, regardless of land quality and, therefore, provided a transfer from owners of high quality land to owners of low quality land. Farmers could not afford to withdraw their marginal or high risk land from quota grain production. In the early 1980's, the bonus acreage provision of the quota system encouraged continuous annual cropping of the traditional crops and reduced the attractiveness of specialty crops or perennial forage in the rotation.²⁴ Farmers are generally logical in their response to the combined results of market signals plus policy or program signals. The end result has been the annual cultivation of land to produce cereals for export from the region.

II. Long-Term Policies: Their Current Direction and Suggestions for Future Change

The programs and policies examined in Part I do not appear to have achieved a stable or sustainable agricultural economy in Western Canada. Saskatchewan and Manitoba, in particular, have great difficulty in supporting a viable rural infrastructure. An array of ad hoc programs has been administered, like a series of blood transfusions, to a patient pale with financial malaise, at frequent intervals over the past decades. These major programs appear to have rewarded those who cultivate land, especially those who produce wheat or other traditional

²²"1970 Report on the Delivery Quota System", Wilson, p. 238.

²³ The late adjustment has not taken place exclusively at the producer level. Research has tended to support an extensive agriculture which produces export crops. Researchers have accomplished much less in the areas of intensive production of crops and development of new crops, than in the area of mechanical technology which facilitates the substitution of land for labour. See W.H. Furtan and George E. Lee. "Economic Development of the Saskatchewan Wheat Economy." Canadian Journal of Agricultural Economics, Vol. 25, No. 3, November, 1977, pp. 15-27.

²⁴Saskatchewan Agriculture. Guide to Farm Practice, 1984, p. 32-33.

crops for export and often those who cultivate marginal land. This direction of development has been an integral part of Prairie history, its settlement pattern, and the upbringing of members of the farming community. Indeed, it was in Australia that the principal author first understood the significance of this, when he heard a grazier exclaim, "Look at that lovely paddock!"²⁵ A puzzled Rosaasen looked in all directions expecting to find a wheat field in the distance, but no - the grazier was pointing to his green grass with a few eucalyptus trees on it! Suddenly, the Prairie farm boy (author) recognized the paradigm from within which he viewed agriculture. His implicit assumption had been that land had to be cultivated almost annually to be useful, even though he had grown up on a dairy farm.²⁶

A. Historical Policies

The Prairies developed as a wheat export economy because of a number of technological and political developments in the 19th century. The repeal of the Corn Laws ended a period in which Britain discouraged grain imports. Steamships replaced sailing vessels and ocean freight rates were cut to less than one-fifth of their former values. Steel milling replaced stone grinding, encouraging the production of hard wheats. Finally, the railway was built across Canada employing a new technology to secure a political dream of a nation from sea to sea and implement the Canadian National Policy. These were all major factors that contributed to the growth and development of wheat production and the export of wheat from the Prairie region. This direction of development was institutionalized in the homestead policy, the legal land survey and the Crow's Nest Pass Agreement.

One perhaps should ask a simple question: "What if the legislators and lawyers were wrong with their homestead policy for Western Canada?" The homestead policy provided a quarter section of virtually free land if the settler "proved up" by clearing and breaking a portion of the land. Given that economies of scale exist, once the settler had an ox or a horse and a plough, it became relatively cheap to clear and break a few more acres. What if settlers had been required to dig a well and fence their land? What if they could have either cultivated the land or grazed livestock? How would that have changed the way in which Western Canada evolved?

The legal land survey system in Western Canada is another major regulation which has influenced land use and the economics of various enterprises. Land was surveyed using a block system of 160 acre quarter sections, one half mile by one half mile. Road allowances were provided for every one mile moving north and south and every two miles running east and west in Saskatchewan and Alberta.

²⁵Some of the anecdotes in this section of the paper come from the personal experience and knowledge of the principal author, Ken Rosaasen.

²⁶On the Rosaasen dairy farm, when visitors arrived they were proudly shown the cattle, the dairy barn and the wheat fields. Occasionally the alfalfa hay would be surveyed and the yield estimated, but native prairie and bush were not recognized as a vital and prestigious part of the enterprise.

This survey system takes no account of land use or land potential, quite unlike the systems of Europe where the legal system is subservient to the land use (farmers in Germany own a number of rows of grapes within a vineyard on a hillside). Placing the legal system above the uses of the land, as Canada did on the Prairies, indicated an attitude of human mastery over the land and the environment. This was the framework within which the land would be owned and utilized in the decades that followed.

Wheat has been King on the Prairies and especially in Saskatchewan. Will it remain so? Are the current strengths of the wheat industry from its agronomics, its economics, or its politics? Perhaps the paper's introductory question should again be raised: What are the long-run economics and environmental implications of maintaining a monoculture system to produce a product worth six cents a pound which must be moved half way around the world to reach markets?

A wise person once said "Good judgment comes from experience.... and experience comes from bad judgment". One of the factors to consider in any new program initiative is what has been learned from the past. This paper now examines some of the current programs and policies in the light of past experience.

B. Present Ongoing Policies

The world trade environment is uncertain at the moment and the current trade war appears to be in danger of escalating rather than subsiding. Many Canadians are hopeful that changes to international trading rules will be the tool that improves Canada's access to world markets. In the past, Western provinces have asked the Canadian government to pursue a strategy that opens markets to their products, both raw and processed. Canada has complained of the tariff on canola oil entering Japan and has argued that it forces Canada to export raw seed. Western Canada is denied the opportunity for processing and value-added which results from the production of edible oil. Similarly, a decade or more ago, Canada sought to have the ad valorem duty on boxed beef entering the U.S. reduced. Much effort is expended addressing the problems in the international arena that discriminate against value-added processing on the Prairies. Yet "Made in Canada" policies continue to discriminate against these same processing activities within the Prairie region.

1. The Crow Benefit and the Western Grain Transportation Act

The payment of the Crow Benefit of approximately 700 million dollars annually under the Western Grain Transportation Act is one of the major policy variables determining the evolution of Western Canadian agriculture. The method of payment debate continues, with some advocating that the transportation subsidy be paid to farmers in order to end the discrimination against prairie processing. Others defend the current method of pay-the-railways based on the volume of eligible grains and distance which they are shipped. Those who advocate a pay-the-farmer scenario sometimes suggest a payment to farmers based on the actual volume of grain shipped over the past five years. This would reward producers

who continue to grow wheat and barley and other crops with a high bulk and low value.²⁷

A pay-the-farmer system based on historical shipments would reduce the payments to a producer who fed some livestock. Under the original Crow, all the grain that was produced on the Prairies was a recipient of the benefit of Crow regulation because of the higher grain price which prevailed on the Prairies.²⁸

Consider the following hypothetical situation where all of the hogs and cattle currently living in the Prairie region were ordered to be slaughtered because they were found to be contributing to a contagious human disease. Both the former Crow Rate and the current WGTA payment mechanism would allow the grain which was formerly fed to these animals to be included in the subsidy mechanism. Pasture and hayland could also be diverted to grain production. This situation would lead to a dilution of the federal government payment per tonne or a per bushel shipped under WGTA. End use of the grain should not be a criterion for excluding some producers from a Crow benefit payment.

The above example demonstrates all the savings to the Canadian taxpayer and all of the added benefits to existing Prairie grain exporters to which Prairie livestock producers have contributed over the years. These producers have not directly collected any Crow subsidy. Similarly, producers of alfalfa seed or lentils, which have higher value and a lower weight of output per acre, have not received the direct benefit that was available had they shifted to wheat or barley production for export. Should these producers be rewarded or punished with a revision in the Crow benefit payment mechanism? A Crow benefit payment per acre, based on the acre's rated productive capacity through a land productivity rating like crop insurance, recognizes that current land use can be altered to produce wheat or traditional crops for exports. To develop a new system based on the volume of past shipment or current shipments will only replace one distortion with another and may entail high ongoing administration costs.

Two related issues can be raised. First, the policy option of treating the railways like highways, in terms of ownership and maintenance of roadbed, should receive serious consideration. Second, if the new trend is market niches and service to customers, why should the Canadian Wheat Board be confined by legislation and tradition to shipping only two raw products and a few of their derivatives? In contrast, the mandate of the Australian Wheat Board was recently expanded to include a larger range of commodities for export. If distance to market is the major disadvantage of the Prairie region, then why not seek to move a more valuable product?

²⁷Rosaasen admits that the rotation used in his farming operation is almost exclusively devoted to wheat, canola and barley.

²⁸It appears indefensible to suggest that only grain producers who received the direct benefit of lower freight cost through Crow/WGTA should maintain the benefit, while those who received the indirect benefit from the higher Prairie grain price which prevailed should not.

2. Land Assessment and Property Taxation

Perhaps the method of measuring Gross National Product (GNP) or the value of all the goods and services produced has contributed to an undervaluation of the natural environment and our stock of resources. Economists measure the cash flow in the economy in terms of goods and services and capital structures, but rarely look at the stock of resources that remain or their condition. An example which may clarify this is the story of the farmer who did very well on his rented Land Bank land, selling topsoil as garden soil in town! This misuse of resources may be obvious to most, but what about the general degradation of crop land throughout Saskatchewan? Soil scientists report that the organic matter content of some Saskatchewan soils may have declined by as much as 50 percent in just a few decades.²⁹ Is the Saskatchewan agricultural economy based on selling our top soil?

The Saskatchewan property taxation system does not punish the farmer when his farming practices contribute to soil degradation. Land is assessed based on its productivity potential in Saskatchewan and a mill rate is established to determine the annual property taxes payable. Assume two farmers have adjoining quarter sections which were assessed at one point in time at \$2,500 each. Assume that Farmer A was a good manager and maintained the quality of his land, but Farmer B employed management practices which resulted in serious erosion by both wind and water. Subsequent to a period of inflation, Farmer A's land is assessed at \$5,400 and Farmer B's land is assessed at \$4,800. Farmer A now pays a larger property tax as his contribution to roads and education in the municipality, based on his higher assessment.

If an entirely different perspective of the property tax system and good management practices were employed, land use might change radically. An organic matter index of the soil could be taken. If it increased between assessments, property taxes would decline. If organic matter decreased, then property taxes would increase. The incentive for the individual should be consistent with the societal view of the proper use and management of the land resource.

C. A Suggestion: Another Special Canadian Grains Program

There can be alternatives to current policies and programs. Consider a Special Canadian Grains Program III for 1990 to promote on-farm experimental agriculture. Its purposes would be to address the farm income problem precipitated by the trade war in the world wheat market between the U.S. and the EC, as SCGP I and SCGP II did, and to expose producers to expanded production alternatives. Instead of rewarding only those who grow the traditional crops,

²⁹The organic matter content of the surface horizon of Prairie soils has decreased by about 50 percent, but absolute declines based on the whole soil profile are probably about 15 to 30 percent. See W.B. McGill, J.F. Dormaar, E. Reinl-Dwyer, "New Perspectives on Soil Organic Quality, Quantity and Dynamics on the Canadian Prairies", in Land Degradation and Conservation Tillage, Partial Proceedings of the 34th Annual CSSS/AIC Meetings. Calgary: University of Calgary, August, 1988, pp. 30-48.

this program would have a very different mandate. It would encourage farmers to grow 20 acres of an "exotic crop". An exotic crop would be anything other than the six major Prairie crops and, additionally, the six major crops delivered to each producer's delivery point.

The SCGP III payment could be a flat rate of \$50 or \$100 per acre. Small acreage intensive crops (e.g. horticultural), capable of providing an estimated \$3,500 of gross income could also be eligible for the maximum payout. The "exotic" crop could be enrolled in Crop Insurance as if it was an only field of wheat and insured at the coverage level of the participant. A further condition of participation would be that the producer write a two page report to describe the agronomic practices used. The participant would also be required to show the plot to three neighbours and have them sign his crop record form.

It is obvious that there might be problems in terms of the potential to glut markets. Perhaps there would not be enough of some of the desired kinds of seed in the spring and some production disasters would occur where the management practices were inadequate. However, think of what might be learned. Even the disasters could be used in extension programming as examples of what not to do. In one year, farmers would not forget how to grow wheat, barley or canola! What would the learning environment be like if 60,000 farmers in Saskatchewan and about an equal number in the neighbouring provinces were to actively look for some new crop production alternatives? What would this do to the demand and direction of research in the future? Would there be some crops that proved winners, even though there would not be the potential to grow the "exotic crops" on two million acres? At least the knowledge base and human capital would be increased.

A brief story may illustrate the importance of flexibility and not being confined to the beaten track. Two Norwegians, Ole and Severn, were out hunting moose when they came across a railway track and began to follow it.³⁰ Soon a train came up behind them, gaining rapidly. "Run, Severn, Run!" exclaimed Ole. After running for about a mile the train was much closer and Severn said to Ole, "Should we try to run in the bush, Ole?" A puffing Ole replied "If we can't outrun 'em in the straight go, we'll never outrun 'em in the bush!"

Perhaps we should consider how Canada is attempting to outrun the Americans and the EC in the grain trade war. How many of their bureaucrats and lawyers would it take to design and implement a farm program for each of the "exotic crops" that Prairie farmers might attempt to grow in the experimental agricultural program (SCGP III)? Would this be the best mechanism to weather the trade war - a form of "taking to the hills" as innocent bystanders have had to do to save themselves during military conflicts throughout history?

Canada has farmers who are capable of learning alternative production processes rapidly, if the regulatory framework gives them the opportunity. Canadians should seek to use the regulatory process to create opportunities. The challenge for Canadian agriculture policy makers is to develop enabling legislation, not disabling legislation.

³⁰Two out of the three authors are of Norwegian decent so they feel comfortable telling the anecdote.

REFERENCES

- Agriculture Canada. Various printed materials on Special Canadian Grains Program and Canadian Crop Drought Assistance Program, 1986-1989.
- _____. This Month With Agriculture Canada. Ottawa: Communications Branch, Vol. 19, 20, 21, 22.
- _____. Special Canadian Grains Program. Ottawa: Communications Branch Press Release, December 9, 1986.
- Agriculture Canada and Saskatchewan Crop Insurance Corporation. Canada/Saskatchewan Crop Insurance Premium Tables, 1988.
- Canada Department of Agriculture. Report of the Minister of Agriculture for the Dominion of Canada for the Year Ended March 31, 1942. Ottawa: Edmond Cloutier, King's Printer, 1942.
- Canada Gazette. Ottawa: Edmond Cloutier, King's Printer. Vol. 75, October 18, 1941, pp. 1248 - 1251.
- _____. Ottawa: Queen's Printer. Part II, Vol. 104, No. 9, May 13, 1970, pp. 467-470.
- Canadian Department of Agriculture. Canadian Agriculture, Spring 1970. Ottawa: The Queen's Printer, 1970.
- Canadian Wheat Board. Annual Reports. 1938-39 - 44,45.
- Canadian Wheat Board Circulars No. 195, April 22, 1941 and No. 200, April 30, 1941.
- Dominion Bureau of Statistics 21-002. Quarterly Bulletin of Agricultural Statistics. 1940-42.
- _____. 21-502. Handbook of Agricultural Statistics. Part II, 1926-57.
- _____. 22-201. Report on the Grain Trade of Canada. 1931-1949, 1972-73.
- Drummond, W.H., W.J. Anderson, and T.C. Kerr. A Review of Agricultural Policy in Canada. The Agricultural Economic Research Council of Canada. 1966, page 63.
- Furtan, W. Hartley and George E. Lee. "Economic Development of the Saskatchewan Wheat Economy", Canadian Journal of Agricultural Economics. Vol. 25, No. 3, November, 1977, pp. 15-28.
- Lang, Otto E. "Operation LIFT" Statement to the House of Commons. Ottawa: February 27, 1970.

McGill, W.B., J.F. Dormaar, E. Reind-Dwyer. "New Perspectives on Soil Organic Quality, Quantity and Dynamics on the Canadian Prairies." Land Degradation and Conservation Tillage. Partial Proceedings of the 34th Annual CSSS/AIC Meetings. Calgary: University of Calgary, August, 1988, pp. 30-48.

PFRA. Agreement on Soil Conservation: Permanent Cover Program. Brochure, 1989.

_____. Conversations with various program officials, 1989 - 1990.

Saskatchewan Agriculture Economics Statistics. Agricultural Statistics, 1985-1988.

Statistics Canada. Historical Statistics of Canada, 2nd Edition, 1983.

Webster's Third New International Dictionary (unabridged). Springfield Mass.: G. and C. Merriam Company, 1976.

Western Producer. July 31, 1941.

_____. March 2, 1972, page. 1.

Wilson, Charles F. Grain Marketing in Canada. Winnipeg: Canadian International Grains Institute, 1979.