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# Adjustment Options and Strategies in the Context of Agricultural Policy Reform and Trade Liberalisation

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## **ADJUSTMENT OPTIONS AND STRATEGIES IN THE CONTEXT OF AGRICULTURAL POLICY REFORM AND TRADE LIBERALISATION**

### **Introduction**

Reforming agricultural policies by reducing distorting support improves economic efficiency as a whole through a better allocation of resources. This implies that adjustment may have adverse effects on some agricultural households and other people engaged in the sector, in particular in the short term. There may also be negative impacts on upstream and downstream sectors and on regional economies that rely on commodities whose prices and production levels fall with reductions in support and protection. Despite pressures to reform to meet multilateral and bilateral trade commitments and to respond to budgetary constraints, these adverse impacts are a major reason why governments find it difficult to make progress in policy reform.

To date there has been much research into what would happen, in aggregate terms as a result of reform, and some attention is also being paid to who would be affected and how. However, there have been very few studies about how to cope with the impacts. This project is a first attempt to focus on options and strategies to assist different types of households and other economic agents negatively affected by reform to adjust.

This paper first defines the scope of the policy measures that are covered, and then describes briefly adjustment packages that have been implemented in OECD countries in recent years. More detailed case studies are presented covering the adjustment policies introduced in the case of beef trade liberalisation in Japan, the reform of the Western Grain Transportation system in Canada, the deregulation of the dairy industry in Australia and the early retirement and young farmer installation programs that were introduced to facilitate structural adjustment following the 1992 CAP reform in Ireland. Finally, some conclusions are offered concerning the characteristics of effective adjustment policies. These build on policy recommendations that have emerged from the TASAP project and are complemented by the findings from the case studies presented here.

The scope of this project is limited to the study of adjustment policies that have accompanied specific reform initiatives. Some of these policies are targeted to specific commodity sectors, others to agriculture as a whole. These policies can be broadly classified into two types. First, there are programs to assist producers to exit the industry and or diversify into non-agricultural activities. These programs include financial grants and job training for other activities. Compensation payments which allow farmers to leave the sector and early retirement plans which have been implemented in many countries fall in this category. Adjustment assistance of this type may also include non-sectoral policy, in other words, integration into (or adaptation of) economy-wide adjustment mechanisms such as unemployment insurance or job finding assistance.

The other type of adjustment policy aims to raise the stock and quality of human, material and social capital of farming in order to improve the competitiveness or viability of those who stay in the sector. These are of two types. One supports the individual farmer while the other helps the community as a whole. The latter type of policy includes farm infrastructure development, and assistance for the improvement of

marketing institutions. Under the first type of programme, different measures may be used - temporary grant or loan concessions to offset the income reduction due to policy reform, farm capital assistance measures to improve farm facilities or to consolidate land, and labour assistance which includes training for business management or the adoption of new technology.

### **Examples of recent adjustment policies implemented in OECD countries**

Brief descriptions of adjustment packages recently implemented in OECD countries follow. They are classified into the two types mentioned above and relate mainly to policies designed to help farmers cope with the short to intermediate run impacts of reform. Some adjustment packages contain both exit and stay-in elements while others cover only one of these strategies. Some are lump sum payments while others involve payments over longer periods. Others involve education, training, loans or counseling.

Early retirement schemes which seek to accelerate the retirement process have been implemented in many countries. Although not listed below, because they involve several countries and are different in content and implementation, some fall within the scope of adjustment policies defined above, in the sense that they were introduced to facilitate structural adjustment and to strengthen competitiveness in the sector following agricultural policy reform. The scheme operated in Ireland is presented as an example.

#### ***Policies including both exit and competitiveness strategies***

##### *Australia pork industry adjustment policy*

Reduced import protection through a progressive relaxation of quarantine barriers caused the Australia pork industry to be exposed to competition from imports. In 1999, the Australian government introduced the AUD 24 million (USD15.5 million) Pork Industry Assistance Package, comprising the AUD 11.6 million (USD 7.5 million) National Pork Industry Development Program (NPIDP), an AUD 8 million (USD 5.2 million) Pigmear Processing Grants Program (PPGP), a AUD 3.4 million (USD 2.2 million) Pork Producer Exit Program (PPEP) and a AUD 1 million (USD 0.6 million) producer training program known as PorkBiz. Although the assistance package encompassed a three-year period, several program elements had a shorter duration.

The NPIDP was designed to improve the industry's competitiveness and boost market development. It funded projects in all segments of the supply chain, including domestic and export promotion and quality assurance. The AUD 1.5 million (USD1 million) National Networks Alliance Program (funded from the NPIDP) aimed to facilitate the development of vertical and horizontal co-ordination in Australian pork production. The PPGP provided grants to processors to stimulate investment in the sector and help address efficiency and productivity problems. The PPEP provided financial assistance for non-viable pork producers to exit the industry. The PorkBiz initiative was designed to improve business planning and the management of financial, human, and natural resources. All projects were completed by 30 June 2002.

##### *Australia sugar industry adjustment policy*

Trade policy reform and a substantial change in global trading conditions put pressure on the sugar industry in Australia. The trade reform involved eliminating the tariff on sugar imports to ensure export parity pricing for domestic sugar sales. The change in global trading conditions related to increased competition from Brazilian sugar exports as well as a distorted world market due to the policies of some sugar producing nations. Long-term forecasts indicate that downward trend in world sugar prices will continue. Given this, many in the sugar industry will need to undertake significant structural adjustments to be able to operate in a low sugar price environment.

Under the Sugar Industry Reform Program (SIRP) 2004, up to AUD 444 million is being made available over five years to help industry undertake the reform and restructuring necessary to ensure a viable and sustainable long-term future. Whilst this assistance was announced as a separate package on 29 April 2004, it essentially expands and builds upon some of the components of SIRP 2002 as well as introducing several new short and long term measures. Short-term measures include: income support and crisis counselling for those most in need; the payment of a one-off sustainability grant, with total funding of up to AUD 146 million (USD 107 million), to growers and mills; and support to undertake business planning. The longer-term measures include: Grower Restructuring Grants of AUD 40 million (USD 29 million), mainly aimed at improving farm management and business practices; and a programme of AUD 75 million (USD 55 million) for Regional and Community Projects, such as rationalization of transport and harvesting systems and seeking alternative uses for sugarcane. Support up to AUD 124 million (USD 91 million) is also available to eligible farmers who make the decision to leave the industry through the Re-Establishment Grants, Retraining Assistance and the Intergenerational Transfer of Sugarcane Farms Scheme. The major part of the funding will be provided through the Federal budget but will also include proceeds from a five-year (2003-07) domestic sugar levy of three Australian cents per kilogram on domestic sales.

The Australian Government previously provided AUD 20 million (USD 11 million) under SIRP 2002 which commenced in October 2002. The Australian Government originally committed up to AUD 120 million (USD 65 million) to this package which was later incorporated under SIRP 2004. SIRP 2002 provided immediate support through welfare payments to both cane growers and harvesters, and interest rate subsidies for replanting the 2002/03 and 2003/04 crops. One-off exit assistance of up to AUD 5 000 (USD 24 443) was available to eligible cane farmers who chose to leave the industry.

### ***Policies to assist exit***

#### *The USA North America Free Trade Agreement (NAFTA) Implementation Act*

The United States introduced the NAFTA Implementation Act in December 1993 to assist adjustment to the effects of NAFTA. The program was designed to provide trade adjustment assistance to firms and workers affected by increased import competition from Canada and Mexico.

The program provided assistance to workers in so-called “primary” firms who lost their jobs either because of increased imports, or because of the relocation of plants to those countries. In a major innovation, it also extended coverage to workers in firms who were indirectly affected by increased trade with Canada and Mexico. These so-called “secondary” firms were either suppliers to primary firms or assemblers of finished components who were affected by import shifts in production in primary firms.

#### *Australia farm family restart scheme*

The Farm Family Restart Scheme (FFRS) commenced in 1997 with funding of AUD 525 million. It is tailored to assist low-income farmers who cannot borrow against their assets by giving them access to improved welfare support, as well as adjustment assistance for those who wish to leave the industry.

It included income support for a maximum period of one year, grant of up to AUD 45 000 for those wishing to leave farming, access to professional advice on the future viability of the farm business, and other forms of counselling. The FFRS operates as a decision support system for farmers considering exiting the industry by giving them access to professional advice on the future viability of their business and on employment opportunities if they choose to exit the industry. It allows them to leave farming before their assets are severely depleted. Since the program began in December 1997 until 30 June 2004, 8 793 farmers have accessed income support, 7 461 have accessed professional advice, 1 061 farmers

received re-establishment grants and 195 farmers have accessed training grants under program. This scheme has been renamed “AAA Farm Help – Supporting Families Through Change” and this has been extended for four years to 2008 with application for income support and the re-establishment grant closing on 30 June 2007.

### ***Policies to improve competitiveness***

#### ***Turkey Agricultural Reform Implementation Project (ARIP)***

The Government of Turkey instigated an important structural adjustment programme for the agricultural sector-The Agricultural Reform Implementation Project (ARIP) (2001 to 2004). The conceptual foundations of this were laid by the policy dialogue with the World Bank. The aim of ARIP is to reduce artificial incentives and government subsidies, and to replace them with a support system that will give agricultural producers and agro-industry incentives to increase productivity in response to comparative advantage. At the same time, the project mitigates potential short-term adverse impacts of subsidy removal, and facilitates the transition to efficient production patterns. At a total estimated cost of about USD 662 million, 90% of which is financed by the World Bank, the ARIP consists of the following main components:

- ***Direct Income Support (DIS) system.*** A unified national program providing an annual payment of TRL 100 million (USD 81) per hectare to all farmers. Limited to a maximum of 20 hectares per farmer, the aim of this payment is to cushion the short-term losses associated with the removal of the current support system, while continuing to provide support to farmers in a less production distorting way. A fund of about USD 74 million was approved for design and implementation of the DIS system.
- ***Farmer transition.*** Funded at USD 186 million, this component will encourage farmers to stop cultivating crops currently over-produced (namely hazelnuts and tobacco) by granting a one-off payment to cover the costs to divert production to other commodities (for example, costs of uprooting hazelnuts).
- ***ASC/ASCU restructuring.*** Funded at USD 178 million, this component will assist in the transformation of Agriculture Sales Co-operatives (ASC) and their unions (ASCU) into genuine co-operative organizations, *i.e.* independent, financially autonomous and self-managed co-operatives for selling and processing members’ production.
- ***Support services.*** Funded at USD 19 million, this component will finance a public information campaign to provide accurate and timely information about ARIP; advisory services, agricultural statistics, laboratory and food testing, crop insurance and other topics related to ARIP implementation; monitoring and evaluation to gauge the social and economic impact of ARIP; and a project co-ordination unit for co-ordination and procurement of financial management support to agencies implementing ARIP.

#### ***Australia lamb industry assists policies***

The United States introduced a tariff-rate quota (TRQ) regime to restrict lamb imports from Australia over the three years from July 1999. The Government of Australia estimated that this would cost the Australian lamb industry AUD 35-40 million (USD 23-26 million) in total.

To assist the lamb industry to cope with the impact of the US decision, the Government undertook to pay, for up to two years, half of the transaction levy applying to all lamb in Australia. The AUD 6 million (USD 3.9million) Lamb Industry Development Program (LIDP) assisted the Australian lamb industry to enhance its performance, improving lamb quality, developing new markets and infrastructure, and

encouraging on-farm productivity and innovation. 19 projects totalling AUD 5.7 million were approved for funding. Levy alleviation commenced on 1 September 1999. The levy alleviation arrangements were extended until November 2001, when the US agreed to lift the tariff quota arrangement.

#### *European Union tobacco policy*

In 1998, in order to encourage the production of higher quality tobacco, a varying proportion of the total premium granted to each producer was linked to quality, as determined by the producer price. A quota buy-back scheme was set up to assist producers to leave the sector. However, a maximum of 25% of quota production in “sensitive production areas” could be excluded from the buy-back scheme.

#### *Korea calf stabilisation scheme*

Korea removed quota restrictions on beef import that had been operated by its state trading company in January 2001 and beef imports became subject to a ‘tariff only’ import regime. The separate sales outlet system for imported beef was also abolished. In order to assist cattle farms, to cope with the expected fall in prices, the government introduced a calf breeding stabilisation scheme. The government sets the stabilisation price and provides deficiency payments when prices of calves fall below the stabilisation price. A ceiling for the deficiency payment is also set. The permanent nature of the measure put in place in response to the liberalisation of beef trade in this case makes it doubtful that it should be classified as an adjustment measure, but it is listed for completeness.

#### *Iceland adjustment policy for horticulture*

Iceland liberalised trade in three major vegetables: cucumbers, tomatoes and red pepper in 2002. In order to protect farm income against the risk of price falls caused by this trade liberalisation, the government introduced new payments based on output for horticultural producers covering three major vegetables that were liberalised. The budget for the new payments in 2002 was ISK 195 million (USD 2.1 million). Again, if these measures prove to be permanent, they should not be classified as adjustment measures.

The above listing indicates that specific adjustment policies falling within the scope of the restricted definition adopted for this project are relatively rare. Moreover, some ambiguity in what governments consider as adjustment policies emerges in that strongly coupled measures whose aim is not adjustment in the sense defined for the purposes of the report, are sometimes implemented under the label of adjustment. These measures are more in the nature of re-instrumentation of existing support and protection, although the package of measures of which they are a part may also contain some adjustment elements.

### **The case of beef trade liberalisation in Japan**

#### *The situation preceding the reform*

Imports of beef were first restricted in Japan in 1958 when a shortfall in domestic production and a rise in domestic prices led to a surge in imports. When first introduced, the quota was defined in value rather than quantity terms. Quantity based quotas were introduced in 1964.

Over the years, the system of controls on beef imports grew steadily more complicated. Initially, all import quotas were assigned to private traders, mainly meat importing companies and meat processing companies, but in 1966, some of the quota was allocated to a state trading agency, the Livestock Industry Promotion Corporation [LIPC, now Agricultural and Livestock Industry Corporation (ALIC)]. In 1975, over 80% of the quota was allocated to the LIPC. Since then, the LIPC used its dominance of the quota to ensure that imports did not have an adverse effect on domestic prices and production.

In addition the domestic market was regulated through a beef price stabilization scheme. The government set the floor and ceiling prices. Once price bands were determined, the LIPC intervened in the market to keep wholesale prices within the price bands by buying beef and storing it when prices were low and by releasing stocks onto the market when prices were high. Imported beef was also used in this stabilizing scheme. When the wholesale price was low, the LIPC did not sell imported beef immediately but stored it until the wholesale price rose to the middle of the price bands, at which point the LIPC would sell the stored beef. Since the LIPC controlled most of the import quota, this price stabilising system worked well. The levies that the LIPC collected on beef imports as a result of its market regulation were used to provide subsidies to the domestic meat industry.

### ***The nature of the reform - quota removal***

Negotiations on quota removal for beef and oranges had occurred between Japan and the United States in the 1980s. In June 1988, Japan agreed to quota removal and tariffication of beef. These measures together are referred to as liberalization. In accordance with this agreement, quota was to be removed on the 1 April 1991 having been increased in each of the three years that preceded the removal. After the removal of the quota, an *ad valorem* tariff of 70% in 1991, 60% in 1992 and 50% in 1993 was introduced. By 2000 this tariff level was reduced to 38.5% as the result of the Uruguay Round Agreement on Agriculture. The revenue raised from the tariff has been used to continue to support the meat industry.

As the result of quota removal, the distribution system was changed. Under the quota system, the LIPC was the main importer although, as with other state trading agencies, it did not import beef on its own behalf. Instead it operated through designated importers and sold the imported beef to wholesalers or sometimes directly to retailers. After the quota was removed, this distribution system had to be simplified. Private traders were able to import and sell beef to wholesalers or processing companies directly.

### ***Adjustment programs***

As explained above, the beef price stabilization scheme had functioned because of the existence of import quota controlled by the LIPC. However, this price stabilization system could not work well if the LIPC was not able to control the quantity of imported beef as private importers could import unlimited quantities for sale on the domestic market. Therefore it was expected that the beef price would fall significantly as a result of beef trade liberalization. In order to support domestic producers suffering the resulting adverse impact, the Japanese government decided to implement an adjustment policy.

Roughly speaking two types of farms are involved in beef production in Japan specialising respectively in either breeding or fattening. Breeding farms keep calves up to about 8 to 10 months old and sell them at auctions as feeder calves to fattening farms where they are kept until slaughter. There are basically two types of cattle in Japan: traditional beef breeds (Japanese black, Japanese brown, Japanese polled and Japanese short horn) collectively known as Wagyu cattle: and dairy breeds (mainly Holstein). Beef from Wagyu, especially from the Japanese black breed, is high quality and expensive whereas other breeds are considered to be of lesser quality. Breeding farms that deal with dairy cattle purchase new born male cattle from dairy farmers and raise them to about 8 to 10 months and then sell to fattening farms. Since these farmers depend for their supply of calves on dairy farmers, their economic situation is closely related to the situation of dairy farmers.

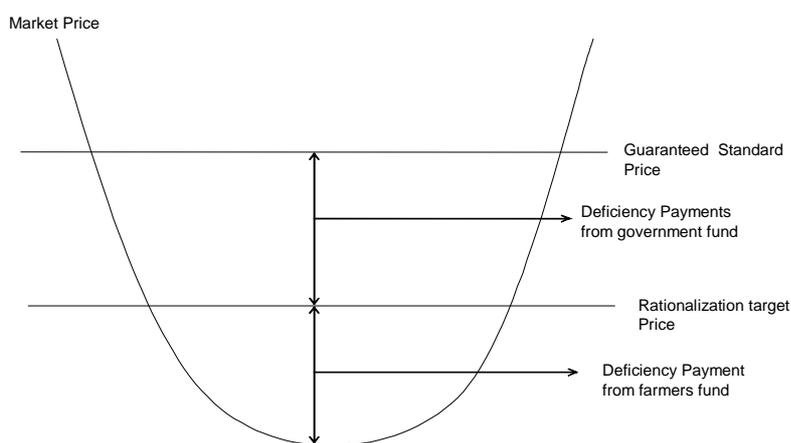
To assist the adjustment process on breeding farms, a Special Measure - Law for Beef Calf Production Stabilization - was introduced. Its main feature was the granting of payments to compensate for price falls. Two different prices are set. First, the guaranteed standard price which aims to maintain the reproduction of beef calves, the level of which is decided by taking the production and demand for beef calves into

account. The second price is the rationalization target price that is lower than the guaranteed standard price and is set taking the international beef price and the domestic production cost of beef calves into account.

All breeding farms are eligible to participate in this program, however producers who want to receive deficiency payments when market prices go below the guaranteed standard price have to register and make a contribution to the fund. The payment is the difference between the guaranteed standard price and the market price per head of cattle registered. If the market price is between the guaranteed standard price and the rationalization target price the payments are government funded. Below the rationalization target price, payments to bridge the gap between the rationalization target price and market price are funded by farmers themselves, and by government and local government (Figure 1). Payments are made when registered cattle are sold at the age of between six and twelve months.

Guaranteed Standard prices and rationalization target prices were set for four types of cattle at the beginning and then for five types after 2000. Two are Wagyu, including Japanese black and Japanese brown. The third category is “other beef breed” and the fourth is “other” which is for dairy calves and crossbred calves. From 2000, this fourth category was divided into two breeds – dairy breed and crossbreeds of dairy cattle and beef breeds. Normally, prices for Japanese black are the highest and those for dairy cattle are the lowest. The payments made by the program so far are shown in Table 1. From 1991 up to now, payments were made to producers of Japanese black cattle just twice; one of them in 2001 in response to the BSE crisis in Japan. On the other hand, payments are made almost every year for the dairy breed and other beef breed. However, payments to other beef breed farmers are far smaller than those to dairy breed farmers. In other words, almost all the payments are made to dairy breed farmers — over 90%. This indicates that the lower quality dairy calves were most affected by trade liberalization, being exposed to strong competition from imported beef. On the other hand, the market for Wagyu especially Japanese black, which are considered the highest quality, is mostly differentiated from imported beef and was able to continue without the support of the government.

**Figure 1. The deficiency payments scheme for calves**



**Table 1. Payments by Breed (Million JPY)**

Year	Japanese Black	Japanese Brown	Other Beef Breed	Other (Dairy Breed + Crossbred)		Total
1990			446			446
1991			1 464	8 076		9 540
1992			1 825	27 305		29 130
1993		2021	2 255	47 101		51 377
1994	1 993	985	1 897	74 864		79 740
1995		143	1 150	29 435		30 727
1996			658	4 452		5 110
1997			815	3 569		4 384
1998		70	1 274	18 613		19 956
1999		510	1 332	29 916		31 758
Total	1 993	3728	13 116	243 331		262 168
Percentage (%)	0.8	1.4	5.0	92.8		100

Year	Japanese Black	Japanese Brown	Other Beef Breed	Dairy Breed	Crossbred*	Total
2000		370	601	11 353	1 149	13 474
2001	1 335	458	594	21 315	8 758	32 460
2002		53	327	17 074	1 219	18 673
2003			168	24 243		24 411
Total (2000-2003)	1 335	882	1 690	73 985	11 126	89 017
Percentage (%)	1.5	1.0	1.9	83.1	12.5	100
Total (1990-2003)	3 328	4 610	14 806	328442		351 186
Percentage (%)	0.9	1.3	4.2	93.5		100

\*Crossbred between beef breed and dairy breed.

Source: Ministry of Agriculture, Forestry and Fisheries, Japan (MAFF).

There is also a support program for fattening farms. In order to receive the payments, the farms are also required to join the program and to contribute to the fund. Each prefecture estimates the average income per head of cattle. When the estimated income falls below the average family labour cost, payments are made from the fund when cattle are sold. The fund is made up of contributions from farmers and government.

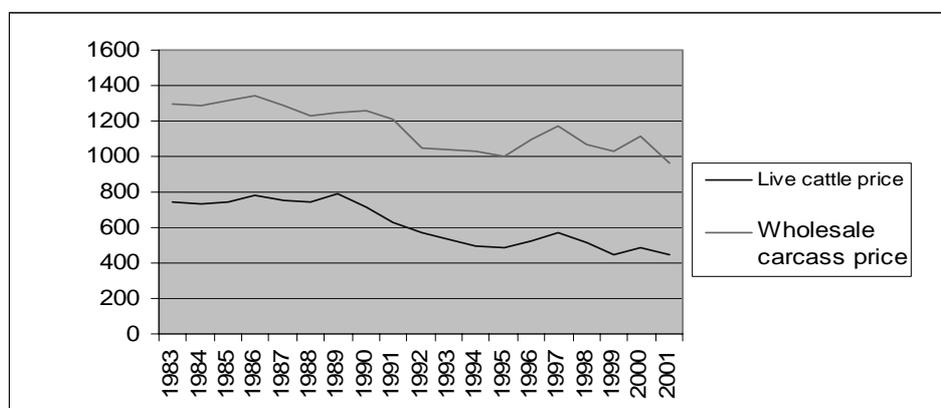
There are also other support programs for the improvement of management. A manual explaining low cost production processes and low cost management techniques was distributed and training courses were provided. There was also a low interest rate loan scheme to help farmers to expand farm size.

### ***The effect of the reform***

Both the price of cattle and the wholesale price of beef fell after the quota was abolished, as a result of the cheaper imported beef that flowed into the domestic market (Figure 2). The wholesale carcass price, which was around 1 300 JPY/kg in the 1980s, started to fall from 1988 when the agreement was made. After the quota was removed in 1992, the price fell to under 1 100 JPY/kg. The cattle price was over

700 JPY/ kg before the quota was removed but it went down to around 500 JPY/kg after beef trade liberalization.

**Figure 2. The Price of cattle and beef**



Source: Ministry of Agriculture, Forestry and Fisheries, Japan (MAFF).

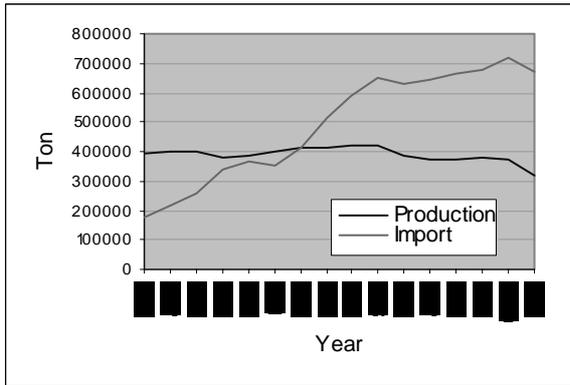
One of main changes resulting from liberalisation besides the price fall was the considerable increase in beef consumption. Several factors contributed to the trend. Firstly the price fall increased consumption of beef at home. Beef had been previously very expensive and not eaten regularly at home but the price fall made it more competitive with other meats such as chicken or pork. Secondly, the Japanese diet was changing and becoming more Westernised which meant that people ate more and more meat. Third was the increase in the amount of eating out. Beef was consumed more at restaurants or at fast food chains.

#### *Import and production*

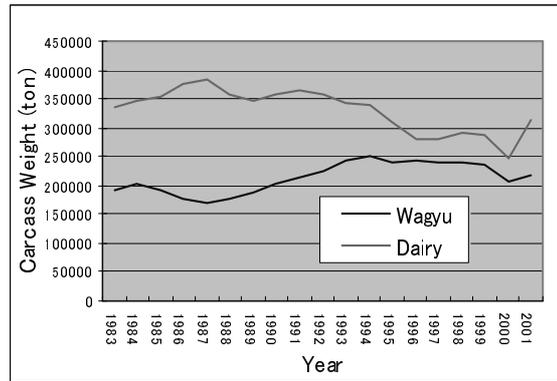
As was expected, beef imports increased significantly after 1988, first due to the quota increase and after 1991 to the quota removal. In 1993 imports exceeded domestic production. After 1995, the increase in imports slowed. Imports are around 650 thousand tons a year from 1995 to 2001(Figure 3).

On the other hand, domestic production of beef remained relatively unchanged at around 370 to 420 thousand ton each year even as imports skyrocketed (Figure 3). Although total production has changed little, there has been some shift in the composition of production among the different beef varieties. The production of beef from dairy cattle fell, whereas the production of Wagyu increased, especially from 1988 to 1991 (Figure 4). This indicates that the beef industry in Japan have adjusted to liberalization by increasing production of higher quality beef and decreasing production of relatively lower quality beef.

**Figure 3. Import and Production of beef**



**Figure 4. Production by variety**

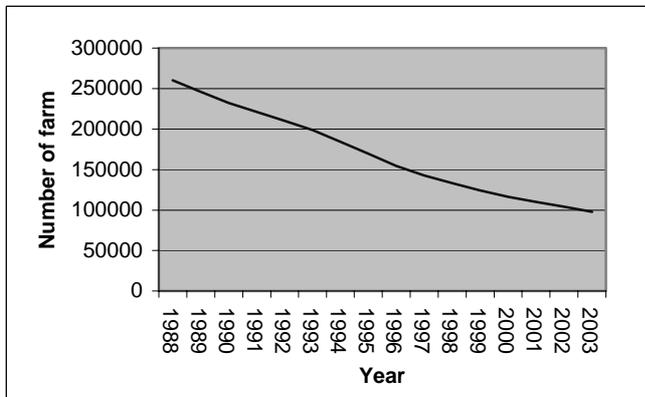


Source: Ministry of Agriculture, Forestry and Fisheries, Japan.

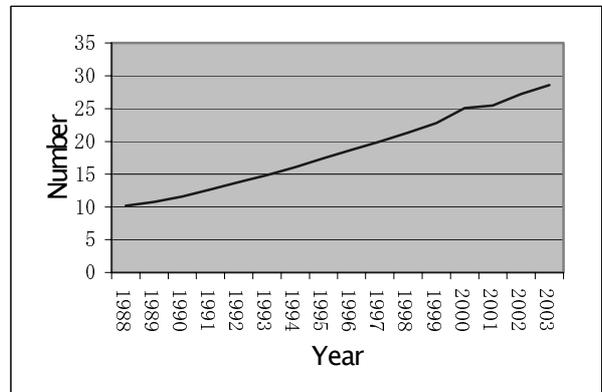
*Farm size*

As was predicted, the number of beef farms fell after quota removal, both dairy cattle farms and beef (Wagyu) cattle farms (Figure 5). The numbers of farms more than halved from 1988 to 2003. On the other hand, farmers who remained in the sector expanded. The number of cattle per farm increased considerably (Figure 6). As farm size became larger, the cost of production has fallen. While the observed changes are in the same direction as those occurring as part of the on-going, long term, process of adjustment at farm level, it would seem that this process was accelerated by the trade liberalisation.

**Figure 5. Number of farms**



**Figure 6. Size of farms**

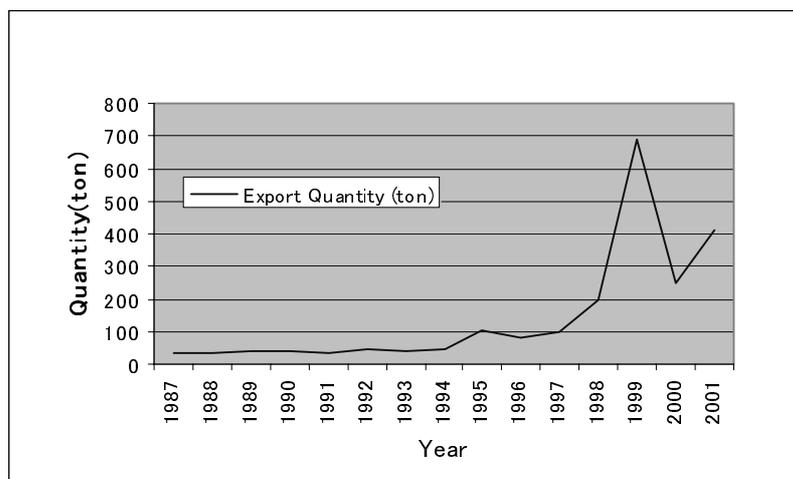


Source: Ministry of Agriculture, Forestry and Fisheries, Japan.

*Exports*

Export of beef from Japan increased in the late 1990s (Figure 7). Although the volume is still small, there is an export market for this high quality beef which Japanese farmers have begun to develop and this market is expected to be expanding in the future.

Figure 7. Beef Export in Japan



Source: MAFF.

### *Evaluation of the adjustment policy*

The beef industry in Japan has adjusted to the beef trade liberalisation to some extent. Production of Wagyu which is a high quality beef that is able to compete with relatively cheaper, lower quality, imported beef has increased. The markets for Wagyu and imported beef are different. The former is mainly consumed at home whereas the latter is mainly for processing and restaurants. The other important adjustment was the enlargement in the farm size that had the effect of decreasing costs. This enables them to compete at lower prices to some extent.

The adjustment programme provided by the government has helped to some extent in this adjustment process. It provided a safety net for producers, cushioning the effect of quota removal and giving producers time to adjust to the more competitive circumstances. On the other hand, there is no time restriction on these programmes which so far have proved quite costly. There is also no exit program included which might have slowed down the adjustment process.

The Japanese government recently formed a research group to review the implementation of this adjustment programme. This review was mainly focused on the effectiveness of the dairy breed adjustment process including the calculation method of the guaranteed standard price for dairy breed. The review judged that the programme did indeed help producers to adjust to trade liberalisation and that some producers had successfully adjusted using the programme.

At the same time, they pointed out several negative aspects of the programme. The major problem is that it has distorted the prices of dairy breed calves because the payment is too high compared with the cost of producers and suggested that it was necessary to review the method of calculating the guaranteed standard price of dairy breed. The Japanese government revised the method and reduced the price in 2005. The review also indicated a moral hazard problem. Because the payments are provided, some breeding farms make almost no effort to move to higher quality beef production. Those producers would likely have exited the sector by now if the programme was not in place. The programme has been operated for a long period – now fifteen years. Considering negative aspects of the programme mentioned above and given the capacity to adjust that was demonstrated by the sector, it would seem that termination of the programme could be considered by the government.

## **Western grain transportation reform in Canada<sup>1</sup>**

### ***The situation preceding the reform***

#### *Grain transportation regulation in Canada*

The government of Canada got involved in the regulation of grain transportation more than one hundred years ago, with the Crow's Nest Pass Agreement of 1897. This agreement, formalized by statute in 1925, fixed freight rates for designated export grains into perpetuity. Over the years, these rates were extended to cover dozens of other agricultural products, including oilseeds, dehydrated alfalfa, and pulses. By the 1970s, Canada's railways were confronted with a major business problem. Their operating revenues were essentially frozen while their operating costs increased each year due to inflation. The railways responded by slowing down shipments of grain to terminal locations, and by reducing investment in the grain handling system. The federal government undertook to alleviate the problem by providing branch line subsidies, supplying the railways with 13 000 new hopper cars, and rehabilitating grain lines. The government realized that grain transportation policy reform was badly needed, but it took time to secure the necessary political support for change.

In 1983, the Federal Government enacted the Western Grain Transportation Act (WGTA). This legislation ensured that the railways' costs of moving grain would be fully covered through a direct payment, called the Crow Benefit, to the railways from the federal government. In 1983 the benefit was calculated at CAD 658 million. It eventually rose to about CAD 720 million in 1989/90, which covered about 70% of total freight costs and producers paid the remaining 30%. It was then stabilized at about CAD 650 million for the 1993/94 crop year and fell further to CAD 565 million in the 1994/95 crop year when producers were paying almost half of the cost.

Transportation subsidies had a strong distortionary effect on the agricultural economy of Western Canada. Over the 12 years that the WGTA was in force, the subsidy averaged CAD 15.98 per ton to Thunder Bay on Lake Superior and CAD 20.98 per ton to Vancouver on the west coast. Lower shipping costs raised farm gate grain revenues received by farmers and encouraged production for export. Offsetting part of the handling and shipping costs to export markets hampered diversification. The subsidy raised feed grain prices and discouraged livestock production. It also discouraged certain kinds of value-added processing and the production of crops that were not eligible for transportation subsidies, such as potatoes.

### ***The nature of the reform***

#### *Pressures for change*

In 1994-1995, the Canadian government was faced with the challenge of eliminating a large fiscal deficit, and reorienting its spending toward key growth-oriented priorities. There was a general effort and broad public support for the reform of government programs to reduce costs and to target expenditures to where they were most needed. Indeed, the Crow benefit was scaled back in 1993/94 and 1994/95 as part of legislation enacted to reduce the budget deficit. By the time of its demise in 1995, the Crow benefit had been reduced to CAD 565 million and farmers were paying almost half the cost of transporting grain.

In addition, there were also multilateral forces encouraging change in the WGTA. New international trade rules negotiated under the Uruguay Round Agreement on Agriculture through the General Agreement

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1. This case study is based on materials provided by the Canadian government and, in particular, on the paper "Grain Transportation Policy and Transformation in Western Canadian Agriculture" by Darcie Doan, Brian Paddock and Jan Dyer.

on Tariffs and Trade imposed significant volume and value restrictions on trade distorting export subsidies. A portion of the WGTA payment was interpreted as an export subsidy for prairie farmers. The government needed to change the WGTA in order to comply with these rules.

Finally, agricultural policymakers in Canada were cognizant of the need to improve the market orientation of the Western agri-food sector. Economic models developed by Agriculture and Agri-food Canada (AAFC) were used extensively in the early 1990's to assess the implications of reforming the grain transportation system, including the elimination of the grain transportation subsidy or changing the method of payment. It was anticipated that removal of the subsidy would create a more flexible and efficient grain transportation system, and that the benefits of increased efficiency would be shared among farmers, shippers, and the railways. As time passed, producer and industry groups increasingly understood the potential implications of the elimination of transportation subsidies and, with some exceptions, were supportive of change.

The conjuncture of all these forces resulted in large-scale policy change. In February 1995, the federal government passed the Budget Implementation Act that, among other things, eliminated the WGTA from 1 August 1995. The repeal of the WGTA eliminated the payment of the Crow benefit to the railways for the movement of prairie grain and related products. Shippers were required to pay the full, regulated freight rates and, as a result, freight costs for prairie grain farmers increased substantially; doubling or tripling in the 1995-1996 crop year.

At the same time that the WGTA was eliminated, the federal government announced a fast-track process for the abandonment of prairie branch lines. It also amended the Canada Wheat Board (CWB) Act to change the price-pooling regime for prairie grains. Prior to the amendments, the price for Board grains was identical at the two pooling points, Thunder Bay and Vancouver. The price structure did not reflect increases in the cost of moving grain from Thunder Bay to an export position on the St. Lawrence, as well as increases in the price of grain at Vancouver, so the Act was amended to change the point of equivalence to St. Lawrence/Vancouver, rather than Thunder Bay/Vancouver. The result was a lowering of grain prices in eastern Saskatchewan and Manitoba relative to Alberta for most of the grain handled by the CWB.

### ***Adjustment programs***

The government recognized that ending the subsidy would have negative financial implications for certain segments of the Western economy. In order to assist the affected areas, the government implemented the Western Grain Transition Payments Program (WGTPP) to compensate landowners for the loss of the subsidy and the Western Grain Transportation Adjustment Fund to help industry adapt to the changes.

The intention of the WGTPP was to compensate for the drop in land values that was expected to result from the elimination of the WGTA. This transition program distributed a one-time capital payment of CAD 1.6 billion to landowners in Alberta, Saskatchewan, Manitoba and part of British Columbia. Landowners were eligible to be paid under the program provided that a crop eligible for the WGTA subsidy had been grown in the 1994 crop year or, where the land was summer-fallowed in 1994 and an eligible product had been grown in the 1993 crop year. The total compensation was allocated to three regions on the basis of the nine-year average payments of the WGTA subsidy from 1985/86 to 1993/94 (Table 2).

WGPTTA was to be paid out in two installments. Approximately 75% of the payments had been paid out by the summer of 1996 and the remainder in the fall of 1996. The payment was based on a formula that considered number of acres, the productivity of the soil, whether or not the land was irrigated and the distance of the land from the nearest port (the closer of Vancouver or Thunder Bay).

**Table 2. Allocation of Program Funds to Region**

Region	Allocation (%)	Allocated (CAD)
Manitoba	16.10	257 600 000
Saskatchewan	56.42	902 720 000
Alberta, as well as those part of British Columbia known as the Peace River District and the Creston-Wynndel areas	27.48	439 680 000
Total	100.00	1 600 000 000

Source: AAFC

The government also created a CAD 300 million, three-year, Western Grain Transportation Adjustment Fund (WGTA) to ease transition and to assist industry adjustment. Part of the WGTA went to assist producers who were adversely affected by changes in the freight cost pooling regime; part provided compensation to alfalfa dehydrators and compressed hay manufacturers; and part, went to fund infrastructure on the prairies, largely the improvement of rural roads. The package also provided new export credit guarantees on up to CAD 1 billion in sales of grain and other agri-food products to non-sovereign foreign buyers.

As supplementary adjustment assistance, the Canada-Manitoba Adjustment Program (CMAP) and Canada-Saskatchewan Adjustment Program (CSAP) were established to assist grain, oilseed and special crops producers complete their adjustment to the elimination of the transportation subsidies during a period of low commodity prices in 2000 and renewed in 2001 as CMAP II and CSAP II. These payments were cost-shared by the federal and provincial governments of Manitoba and Saskatchewan and amounted to CAD 360 million (USD 231 million) in 2000 and CAD 292 million (USD 187 million) in 2001.

### *The effect of the policy reform on adjustment*

The repeal of the WGTA altered the structure of the agri-food sector. It transformed Canadian agricultural production, marketing, and exports of grains, oilseeds, and livestock. Subsidized freight rates had encouraged exports and diverted grain from domestic uses. Removal of the subsidies raised the costs of transporting grain from local elevators to an export position. That resulted in lower farm gate prices and lower rates of return for prairie grain and oilseed producers. Prairie grain farmers quickly recognized that in order to take advantage of the opportunities created by the repeal of the WGTA, they would have to alter their production patterns. Production on the prairies shifted from export grains to other commodities, such as specialty crops and livestock. Entrepreneurs also took advantage of lower grain prices by developing the food processing industry on the prairies.

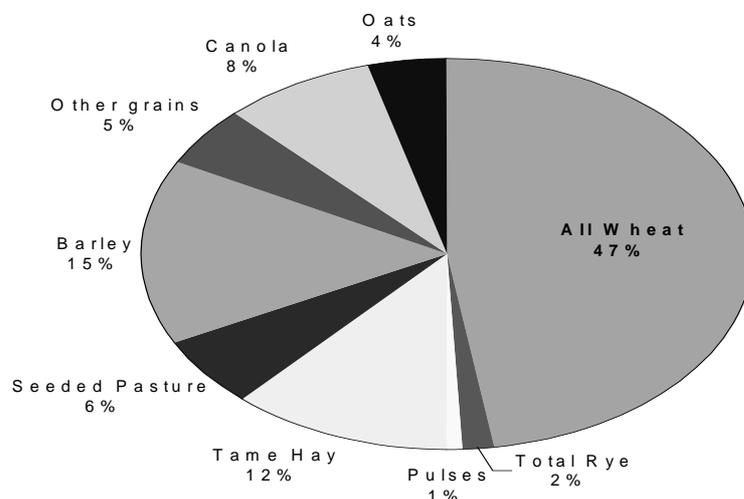
### *Crop diversification*

AAFC studied the diversification of crop production in the Prairie Region. In this work, they used the Shannon-Weaver function (Shannon and Weaver 1949) to calculate indices of agricultural diversity. Indices calculated by this method range between 0 (no diversity) and 1.0 (perfect diversity). For example, if there are five crops (wheat, barley, oats, peas and beans) and total crop area is 100 hectares, a diversity index of 1.0 would mean that 20 hectares of each crop was harvested. The diversity index has increased in the Prairie Region by 18.5% from 0.54 in 1990 and to 0.64 in 2000.

Figures 8 and 9 show the composition of crops grown on the prairies in 1990 and 2000, respectively. Over the ten-year period, wheat acreage declined from almost half of all crop acreage (47.4%), to less than a third (31.3%). There was a substantial increase in the crop acres of canola, pulses, tame hay, and seeded

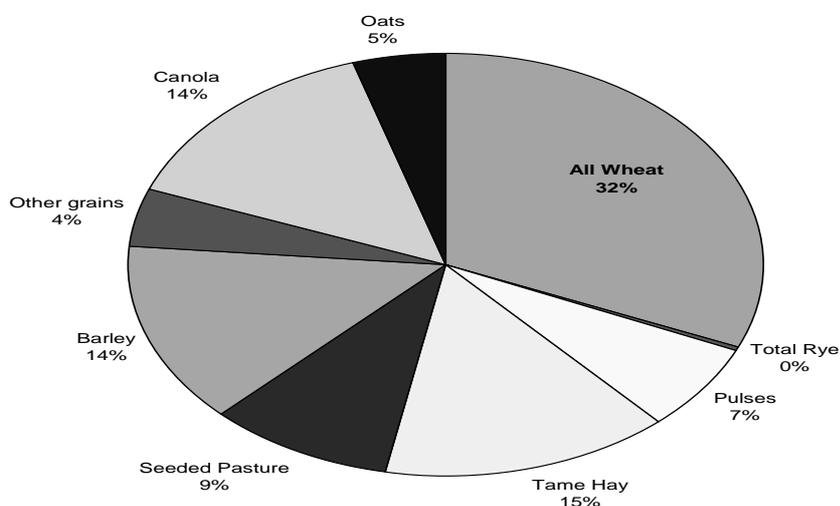
pasture. As might be expected, increased production of high value crops and those for domestic processing (canola) came at the expense of wheat area. Crop diversification in Saskatchewan, while slightly below the Prairie average, has shown the greatest increase of all the Prairie Provinces.

**Figure 8. Prairie Crop Area 1990**



Source: AAFC.

**Figure 9. Prairie Crop Area 2000**



Source: AAFC.

The expansion of livestock production on the prairies resulted in increased demand for feed. Most feed barley is now used in Canada rather than being exported. The feed share of total domestic barley use increased by about 13% in post-WGTA. Feed use of other crops such as dry peas, canola meal, and soybean meal has also increased.

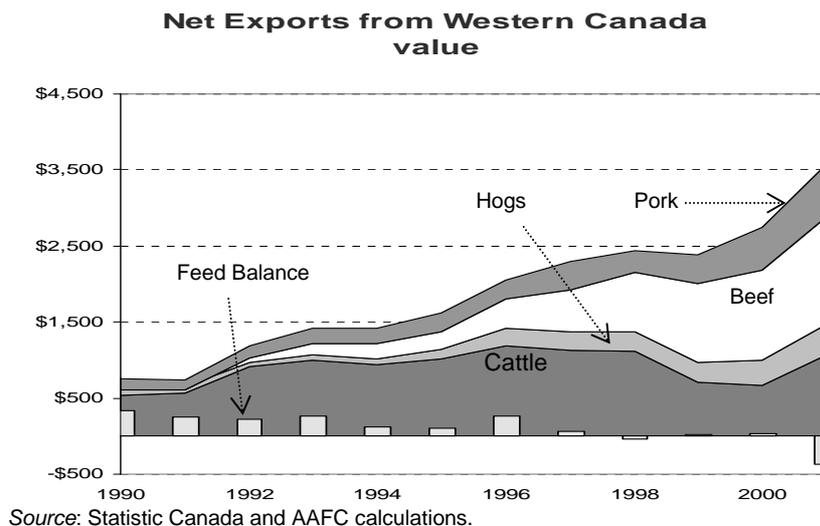
### Livestock production

An increase in livestock production in the prairie region was widely predicted following the removal of the Crow benefit. This is because feed grain prices in the Prairie Region would be lower with the removal of the subsidy. From the work conducted by the AAFC, the proportion of farms with revenue from livestock remained stable and even saw a small increase in the Prairie Region while it was decreasing in the rest of Canada. This indicates that more Prairie farms were diversifying into livestock production relative to the rest of the Canada.

Growth in Prairie cattle inventories has outstripped that of the rest of Canada. Prairie cattle inventories increased by almost 2 millions from 1987-2001 while growth was absent in the rest of Canada. Hog inventory growth in the Prairies and in the rest of Canada followed a similar pattern increasing by around 1 million over the period from 1987 to 2001. Within the Prairie region, Manitoba had the greatest growth in hog inventories, an average annual rate of 7.4%. Manitoba's average hog inventory growth rate was double that of the Prairie Region average. Manitoba producers were well placed to take advantage of the changes arising from elimination of transportation subsidies. Due to the long distances that separate Manitoba grain farms from ocean ports, the elimination of transportation subsidies caused Manitoba's grain prices to drop further than those in Alberta or Saskatchewan. Feed grains, in particular, have a tendency to stay in Manitoba rather than being exported.

The free trade agreement with the United States, introduced in 1989, also helped to spur expansion of livestock production in Western Canada. While Canadian slaughter capacity has increased in recent years, a large proportion of Western Canadian cattle and hogs is exported to the United States for feeding and/or slaughter; approximately half of all meat produced in Canada is exported to US markets. Figure 10 shows the increase in the value of livestock exports from Western Canada. Notwithstanding a drop in the value of cattle exports in 1999-2000, the value of livestock and livestock product exports (especially beef) has increased rapidly since WGTA repeal in 1995. As a result of the increased demand for feed resulting from the growth in livestock production, the feed balance on the prairies has been negative in recent years; more feed grain is now imported than exported from the region.

**Figure 10. Net exports of livestock products and feed from Western Canada**



### *Value-added processing and food manufacturing*

Much of Canada's high-value food manufacturing is clustered in the central part of the country (Ontario and Quebec), due to proximity to large Canadian and US markets. Despite geographic disadvantages, food is the leading component of the manufacturing sector in the prairie region. It was expected that the removal of the WGTA would provide a boost to the prairie food manufacturing industry, and that there would be a shift in export destinations, with relatively more value-added product going to the US.

Analysis undertaken by AAFC shows that value-added processing has indeed benefited from the removal of the Crow benefit; shipments from the prairie food manufacturing industry increased by 56% between 1990 and 1999. A large proportion of that increase was in Alberta, where meat processing is the largest sub sector of the food processing industry. Shipments of meat products from Alberta were valued at CAD 4.8 billion in 2000, or approximately 57% of total food manufacturing shipments. Food manufacturing shipments also increased substantially in Manitoba, from CAD 1.7 to CAD 2.8 billion between 1990 and 2000.

### *Land value*

Analysis has shown the value of agricultural assets, particularly land, is usually considered to be determined by the capitalized value of the current and future stream of earnings generated by the asset. Thus an established program like the WGTA subsidy, which had positive impact on net returns, was almost certain to have been capitalized into the value of land. The repeal of WGTA could be expected to have a negative impact on land value whereas the WGTTP was expected to offset that impact.

AAFC conducted research on land value changes in the Prairie Region. Farmland values rose uninterrupted between 1995 and 1999. Although the WGTA was abolished in 1995, price forecasts for grain were sufficiently strong to maintain the upward pressure on land values nationwide. The WGTTP payment made to Prairie landowners may have buoyed farmers' confidence enough to encourage land purchases. This study also compared land values in the Prairie Region with those in the rest of Canada. Those two are highly correlated over the period from 1990 to 2001 but farmland values in the Prairie Region have fallen relative to those in the rest of Canada and the gap has been increasing.

### ***Conclusion***

Experience in this case has shown that agriculture is a dynamic industry and that reform of policy can generate new challenges and opportunities. In the removal of the WGTA, many analysts anticipated that it would favor domestic consumption over exports, as well as livestock production. The study shows that diversification occurred on three broad fronts: higher valued crops with more domestic processing, more forage and pasture, and the production of feed rather than food varieties of grain. When these subsidies were removed, farmers and others in the industry responded quickly to market signals through a diversification of crop patterns, an increase in livestock production, and investments in value-added processing (Doan, Paddock, Dyer).

Diversification is not, however, costless. It may be hampered by sunk costs, the existence of specialized skills, and by economies of scale in production. Crop diversification may also be limited by soil type, climatic conditions, and distance to market. Policy design needs to take these factors into account in order to assist the adjustment process to occur. Despite these obstacles, significant diversification took place in the years following the removal of the WGTA. Canada's experience with transportation subsidies demonstrates that the right policy can unleash the potential of the private sector to create new opportunities in response to changing conditions (Doan, Paddock, Dyer).

Another issue is the form of compensation. The WGTPP was a lump sum payment made to producers on the basis that it would replace the annual WGTA subsidy formerly paid to the railways. The amount of the payments was adjusted so that it would equal the present value of the annual WGTA payment into perpetuity. The payment was determined to be sufficient to offset the decrease in farmland value that was expected to follow from the reform (AAFC). In fact, land prices increased after 1995, although a growing gap between land prices in the Prairies and elsewhere in Canada emerged in later years. This demonstrates the difficulty of correctly anticipating the effects of a reform and designing compensation commensurately.

## **Australia dairy industry adjustment policy<sup>2</sup>**

### ***The situation before the reform***

Australian dairy policy has had a long history of price support from various restrictions and assistance measures. A national market for dairy products did not exist in Australia before the industry was deregulated because Australia had six separate regulations, one in each state, rather than a national industry. In addition, the regulations created an artificial market separation between fluid milk sales and milk used for dairy products. The Commonwealth maintained a price support scheme for manufacturing milk.

In the fluid milk sector, State Marketing Authorities regulated producer prices. There was no commonality in prices between the States. Prices were about double the price paid for identical milk used for manufacturing purposes. Some States used production quotas to ration access to the fluid milk market. Other States had pooling arrangements where farmers received a price premium for a fixed proportion of their annual milk output.

In the manufacturing milk sector, producer prices were supported by policy measures that required domestic consumers to pay higher prices for dairy products under the *Domestic Market Support* (DMS) scheme. Levies were imposed on milk used for domestic sales of milk and dairy products. Producers received a DMS payment based on their manufacturing milk output. The total levy revenue and the supply of manufacturing milk determined the payment rate.

Most dairy producers gained some assistance from both sets of policy arrangements. In the lead up to deregulation market price support for manufacturing milk declined due to strong growth in manufacturing milk production. The fluid milk pricing controls continued to provide substantial levels of assistance. The nominal rate of assistance was in the order of 20-25% and the PSE measured by the OECD ranged between 10 and 25% in the years just before the deregulation. The rate of market support varied considerably between each State. This is because the regulated prices for fluid milk were set at different levels in each State. In 1999/00 Queensland had the highest rate of assistance which was 53% to 67%. It reflects a stronger focus on fluid milk production relative to the other States. Industry assistance was lowest in Victoria (9-11%) because fluid milk sales accounted for about 6% of Victoria's milk production at the time of deregulation.

### ***The nature of the reform***

By the late 1990's there were pressures for policy reform. Legislation for manufacturing milk price support (the DMS scheme) was due to terminate in June 2000. The industry was heavily dependant on export sales and the growth in manufacturing milk supplies had diluted the value of the support payments. Revenue raised by the industry levies was being spread over larger supplies of manufacturing milk. The Victorian industry, particularly processors who saw benefits in deregulating in terms of supply systems and

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2. This case study is based on the report "Policy Reform and Adjustment in the Australia Dairy Industry" by David Harris of D.N. Harris and Associates, which was prepared for the OECD Secretariat.

increasing opportunities for export argued for deregulation. Victorian farmers largely agreed with the processors. State Government made the decision to deregulate after a plebiscite of dairy farmers who overwhelmingly supported deregulation and the regulation was terminated on 1 July 2000.

The Victorian decision would inevitably have caused the fluid milk price support schemes in other States to collapse and cause widespread economic disruption in most dairying regions. Industry representatives wanted an orderly transition to a deregulated market. They proposed complete deregulation of the dairy market in conjunction with adjustment assistance. All fluid milk regulations and the DMS scheme would simultaneously end on 1 July 2000. There would be no transition period. September 1999 the Government announced that the DMS scheme would terminate

### *Adjustment programs*

The government announced implementation of an AUD 1.78 billion restructuring package at the same time as they announced the termination of the DMS scheme. The objective of this package was to ensure adjustment assistance was available as soon as possible after the removal of the support measures. Producers had limited time to prepare for deregulation (9 months) and it involved a substantial reduction in price support for many producers. There were widespread concerns about the economic disruption that could occur across a range of dairying regions. The *Dairy Industry Adjustment Package* had three components:

- The *Dairy Structural Adjustment Program* (DSAP) for all dairy producers.
- A *Dairy Exit Program* (DEP) to assist farmers exiting the industry; and
- The *Dairy Regional Adjustment Program* (DRAP) to manage the flow-on effects for regional dairy communities.

#### *DSAP - adjustment assistance for dairy producers*

The DSAP component of the package was developed by the industry in early 1999. It was based on estimates of the value of the support measures in 1998/99 and was refined after consultations with the government. The objective was to provide a restructuring grant for all producers affected by deregulation. Those entering the industry after deregulation would not receive any assistance. Applications for a DSAP payment were accepted for a three months period in mid 2000. Producers were initially assessed for eligibility. Anyone with an economic interest in a dairy farm enterprise on the 28 September 1999 was eligible to apply. However, there was a requirement that milk had been delivered for at least part of the 1998-99 season and that a producer had not received any other type of Commonwealth assistance.

The restructuring grants had two payment components of 46.23 Australia cents per litre for fluid milk and around 8.96 Australian cents per litre for manufacturing milk. This ensured DSAP assistance was targeted according to the loss of support under each policy arrangement. Most producers supplied both types of milk but at different levels. The size of the grant for each producer reflected the level of assistance they had previously obtained from the two sets of regulations.

DSAP accounted for AUD 1.63 billion of the package funding. It was an estimate of the loss of income from three years of regulated market returns. Estimates of fluid milk assistance included a price premium to reflect the expected market value of year round milk supplies. In effect DSAP assistance was broadly equivalent to maintaining the regulations for a further three years.

Adjustment pressures were expected to be much greater for producers focused on fluid milk sales. Accordingly DSAP grants were considerably higher in States where fluid milk sales were a high proportion

of total milk output. For example, on a per farm basis the DSAP payments were worth AUD 196 000 in NSW compared with AUD 97 000 in Victoria (Table 3). Overall 55% of the AUD 1.63 billion in DSAP funds was allocated to around 18% of the total milk production.

**Table 3. DSAP assistance for dairy producers**

	Fluid Milk		Manufacturing Milk		Total DSAP	
	Total Payments (AUD million)	Payments per farm** (AUD thousands)	Total payments (AUD million)	Payments per farm** (AUD thousand)	Total payments (AUD million)	Payments per farm** (AUD thousand)
Victoria	235	30	523	67	758	97
New South Wales	276	160	62	36	338	196
Queensland	181	117	40	26	221	143
Other States	202	111	110	61	312	172
Australia	893	69	735	57	1628	126

\*Estimate based on 1998-99 fluid milk sales & DSAP payments.

\*\*Total payments per number of registered dairy farms as at 30 June 2000.

Source: Dairy Australia, Australian National Audit Office.

DSAP entitlements were calculated on a farm enterprise basis and were fully decoupled from current production. The grants were based on historical milk production for the 1998/99 season. This ensured the level of assistance was fixed. Producers could not change their entitlements by adjusting output. Industry authorities had farm delivery records as part of the existing support schemes. They were used to establish a fixed amount of fluid milk and manufacturing milk production for each enterprise.

A Government organisation – the *Dairy Adjustment Authority* (DAA) – was established to verify enterprise assessments and manage the distribution of grants. Individual DSAP entitlements were divided among the parties with a verifiable economic interest in the farm enterprise. The DAA was required to identify who may be entitled to a share of each entitlement:

- Owner-operators, companies, trusts or partnership arrangements.
- Share farmers and the farm owners; and
- Those involved in leasing arrangements.

There were around 12 900 dairy farms at the time of deregulation. DSAP and SDA entitlements applied to a farm enterprise. However, payments were shared between entities with an economic interest in the enterprise. Payments were distributed to almost 29 900 entities and averaged AUD 54 000 for DSAP. Each DSAP entitlement was divided into 32 quarterly instalments and a fixed payment right was issued for an eight year period commencing in 2000/01. Quarterly distributions were likely to encourage some producers to view the grant as an income support payment. Industry representatives were concerned it could dilute the program objective which was to foster adjustment. A single payment was more likely to encourage producers to consider the options for restructuring their farm enterprise to improve future viability. However, it was also the case that Australia would have exceeded its yearly AMS allowance if one lump sum payment had been provided.

DSAP payments were treated as income for tax purposes. The entitlement and associated tax liability were retained by individuals for the duration of the payment period even if they exited the industry. DSAP entitlements for an individual enterprise were capped at AUD 350 000. The cap could only be exceeded if the applicant's dairy income exceeded 70% of gross income.

#### *DEP - exit assistance for producers*

As the part of the Dairy Industry Adjustment Package, government provided a *Dairy Exit Program* (DEP) to those who decided to retire from the industry. This was a 'safety-net' assistance program designed to assist farmers in serious financial difficulty. It was open to applications for two years and successful applicants had to cancel their DSAP entitlements. Acceptance of a DEP grant required producers to sell their dairy farm and withdraw from agricultural production for five years.

The program was subject to a highly restrictive assets test which limited the number of applicants. The maximum grant was a tax-free lump sum of AUD 45 000. It was available if total assets were less than AUD 90 000 after the sale of the farm enterprise. For asset levels exceeding this threshold the grant was proportionally reduced. The farm sale requirement also limited the attractiveness of the program as some producers wished to exit the industry for other agricultural activities.

For most farmers the maximum DEP grant was less than their DSAP entitlement after adjusting for tax. Most of the producers that left the industry relied on their DSAP grants for exit assistance. During the first two years of deregulation 1 840 farmers left the industry. The program closed in June 2002 with around 120 recipients and program expenditures of around AUD 7 million.

#### *DRAP - adjustment assistance for regional communities*

The restructuring package included AUD 45 million for a *Dairy Regional Adjustment Program* (DRAP) spread over three years. The program objective was to create employment opportunities in dairy dependent communities that were adversely affected by deregulation. There were concerns about the regional economy effects of lower farm incomes, farmer retirements and plant closures.

The program was designed to supplement local business investment initiatives. Individuals or groups could apply for grants to help establish alternative activities. Some dairy companies obtained grants to support plant redevelopments and other business activities. DRAP funds were also used to support infrastructure projects, retraining initiatives and counselling services in badly affected regions.

#### *SDA - Supplementary adjustment assistance*

In late 2000, the Government made an assessment of the regional effects of deregulation. The impact on manufacturing milk returns had been cushioned by higher world prices but there were concerns about the extent of the decline in fluid milk prices. In May 2001 the Government announced the *Supplementary Dairy Assistance* (SDA) package of:

- AUD 100 million in supplementary payments for fluid milk.
- AUD 20 million of additional DRAP funding; and
- AUD 17.9 million for DSAP discretionary payments for a small number of producers where the original assessment was affected by unforeseen circumstances.

The package was primarily established to provide additional transitional assistance for producers that were heavily dependant on fluid milk sales. Producers with an existing DSAP entitlement and that had an

economic interest in a dairy enterprise on the 21 May 2001 could apply for an SDA supplementary payment. Producers who had exited the industry during the intervening period were not eligible.

SDA payments were restricted to farmers with fluid milk sales exceeding 35% of total production in 1998/99. Payments were calculated on a sliding scale based on the proportion of total output sold as fluid milk. Producers received 1.2 Australian cents per litre for every 1% of milk output that exceeded the 35% cut-off point. The payment rate was capped at 12 Australian cents per litre for the fluid milk sales that exceeded 45% of total production.

The SDA payment was capped at AUD 60 000 per dairy enterprise and payments were treated a taxable income. Producers could take a lump-sum or 32 quarterly instalments over the same 8 year period that applied for DSAP payments. The assessment criteria effectively excluded producers focused on manufacturing milk. They were mostly distributed to producers of fluid milk in Queensland and NSW. On a per farm basis SDA payments were worth about AUD 23 000. The extra payments increased assistance for the fluid milk sector to AUD 995 million.

#### *Funding of adjustment assistance*

The total cost of Government assistance was about AUD 2 billion with AUD 1.75 billion in direct assistance. The packages are funded by a *Dairy Adjustment Levy* imposed on domestic sales of drinking milk. Exports are exempt but the levy applies to sales of imported milk. The levy rate was established to achieve an immediate reduction in the retail price of milk. In most States prices were expected to fall by at least 10 Australian cents per litre after the levy was applied. The consumer tax of 11 Australian cent litre will terminate when the cost of both packages are fully covered. There was no funding from consolidated revenue. Funding obligations include programs costs, administration expenses and interest costs. Final program payments will be made in June 2008 but it is expected the levy will remain in place until the first quarter of 2010.

#### *The effect of the reform*

##### *Industry adjustment to deregulation*

The producer response to deregulation was driven by changes in the price received for milk. The effect on manufacturing milk prices was cushioned by a strong rise in export returns. World prices for skim milk powder increased by 70% in Australian dollar terms in 2000/01. Whole milk powder prices rose by 53% and cheddar cheese prices increased by almost 30%. The improved export returns caused the Victorian producer price to rise by 33% in the first year of deregulation. There was a further rise in manufacturing milk prices in 2001/02 due to a substantial devaluation of the Australian dollar. Two years of strong export returns off-set the loss of assistance from terminating the DMS scheme. The unexpected rise in manufacturing milk returns was a complete contrast to market conditions in the lead up to deregulation. In 1999/00 manufacturing milk prices declined by 10% and many producers in the export sector were under significant financial pressure. The adjustment assistance package was developed in this market environment. These price rises were unusually strong and in 2002/03 export returns declined in line with changes in global market conditions. In Australian dollar terms cheese and milk powder prices fell by 25-30%. The average price received for milk in Victoria declined by about 25%.

There was a substantial fall in fluid milk prices. In 2000/01 average milk prices fell by 12% in NSW and 17% in Queensland. There is a stronger focus on fluid milk sales in these States. As manufacturing milk returns increased by about 30% this suggests the initial fall in fluid milk prices was around 35-40%. Milk prices recovered in 2001/02. Manufacturing milk returns in 2001/02 were about 10% higher than in 2000/01 which suggests fluid milk prices may have increased by 10-15% from previous year. The changes

in producer prices for fluid milk are broadly consistent with the changes in retail milk prices. In 2000/01 the average price of a litre of milk declined by 16% for supermarket sales of generic house brands. This price fall occurred despite the introduction of the *Dairy Adjustment Levy*.

#### *Structural change since deregulation*

Deregulation accelerated the industry adjustment process that had been evident for some time. After three years 2 234 farms had left the industry, a decline of 17% (Table 4). Initially farm exits were limited in Victoria but the adjustment accelerated in the second year. The increased exits occurred despite good seasonal conditions and strong export returns. Improved farm asset values may have encouraged some older farmers to retire rather than initiate new farm developments. Adjustment pressures were stronger for producers focused on fluid milk sales. In NSW almost 20% of the State's dairy farms left the industry in the first year of deregulation. In Queensland 15% of farms retired from the industry. By 2002/03 most of the adjustment to deregulation had occurred. Retirement rates returned to levels that were typical of the pre-deregulation period.

**Table 4. Change in dairy farm numbers since deregulation**

Year ending 30 June		1998/99	1999/00	2000/01	2001/02	2002/03
Victoria	Number	7926	7806	7556	7079	6801
	%change	-2.0	-1.5	-3.2	-0.4	-3.0
New South Wales	Number	1771	1725	1391	1323	1290
	%change	-2.5	-2.6	-19.4	-4.9	-2.5
Queensland	Number	1589	1545	1305	1152	1125
	%change	-3.2	-2.8	-15.5	-11.7	-2.3
Other States	Number	1870	1812	1582	1494	1438
	%change	-3.4	-3.1	-12.7	-5.6	-3.7
Australia	Number	13156	12888	11837	11048	10654
	%change	-2.4	-2.0	-8.2	-6.7	-3.6

\*Poor season and deregulation on 1 July.

\*\*Widespread drought conditions.

Source: Dairy Australia.

In 2000/01 milk production declined by 3%. This was the first reduction in output since 1989/90. Farm retirements played a major role in the decline but poor seasonal conditions were also a contributing factor. In Victoria a 1% decline in production was primarily due to the effects of seasonal conditions on herd performance. Milk production fell by 10% in Queensland and 5% in NSW. It was largely due to farm retirements and lower cow inventories. Production recovered in 2001/02 with supplies rising by 7%. The growth in output was driven by developments in the export sector with milk supplies rising by 9% in Victoria. Improved seasonal conditions and higher export returns encouraged farmers to use more supplementary feed. The effects of deregulation were still evident in the fluid milk sector. Milk production declined marginally in Queensland but rose slightly in NSW.

In 2002/03 farm retirement rates returned to pre-deregulation levels. Production declined by 8% but this reflected the severe drought conditions that affected all dairying regions. Victorian production fell 11%. The structural changes in response to deregulation largely happened over a two year period.

Australian exports of the major dairy products declined by 6% in 2000/01. Some of the decline can be attributed to the effects of deregulation. Poor seasonal conditions in Victoria also contributed to the

reduction in manufacturing milk supplies. Exports recovered in the following year in line with the strong growth in Victorian milk supplies.

#### *Farm level adjustment since deregulation*

Changes in milk output per farm reflect the net effect of farm level adjustments to deregulation. There was an immediate response to deregulation. Milk output per farm increased by 6% in the first year and almost 14% in 2001/02. The change was especially evident in the fluid milk sectors. Farm output had increased by 26% in NSW and 18% in Queensland after two years. In Victoria farm performance was affected by poor seasonal conditions in the first year of deregulation. After two years milk output per farm was up 19%. The changes in the export sector reflect adjustment to deregulation and higher export returns.

The growth in average farm output was primarily driven by expansion in the scale of the farm enterprise. After two years of deregulation the average herd size was 192 head, up 14%. The change was especially evident in States where producers were focused on fluid milk sales. In 2000/01 the average herd size in Queensland and NSW increased by 10% and 20% respectively.

The growth in average herd sizes was less pronounced in Victoria. Average milk yields declined in the first year of deregulation by around 3% due to poor seasonal conditions in Victoria. In 2001/02 milk yields increased substantially but there were differences between the States. In Victoria average milk yields increased by 11%. This was primarily a response to the higher export returns. Victorian producers used more supplementary feed to boost livestock performance and take advantage of the higher prices. Milk yields were marginally lower in NSW in 2001/02 but increased by 5% in Queensland.

Changes in the physical performance of the industry in 2002/03 mostly reflect the effects of a widespread drought. Structural adjustment to deregulation was mostly completed by the time the drought began to affect industry performance. The rate of farm retirements slowed appreciably in 2002/03, especially in NSW and Queensland. Average output per farm declined 5% and milk yields fell by 6%. In Victoria the severity of the drought and a decline in export returns caused a sharp deterioration in farm income.

#### ***Conclusion***

One of the main features of deregulation of the Australian dairy industry was removal of all price support measures over-night. It caused an immediate, substantial decline in average returns. In the lead-up to deregulation farmers were unsure about the nature and implications of the reform. Producers had 9 months warning after the decision was announced to consider their situation and make on-farm adjustments. The industry has adjusted rapidly to the effects of deregulation. The adjustment package has helped producers to make the transition. In addition, world prices for dairy products were high which considerably helped the transition by increasing export returns.

The adjustment response of most interest is the reaction of producers who specialised in fluid milk sales. Some have retired from the industry. Those who remained in the industry experienced a substantial drop in average returns. These producers have made adjustments to their farming operations to off-set the decline in farm income. One of the features of this assistance package was that it includes both support to the producers to exit from the sector and to stay in the sector. The adjustment assistance helped those who decided to leave the sector but also helped to improve the viability of those farm enterprises that decided to remain in the sector.

In general, producers reacted by increasing farm output. Farmers expanded their milking herds and in some cases increased land area. Changes in secondary input use improved the productive performance of the primary inputs. Carrying capacity increased through greater use of improved pastures, fertilizer and

water inputs. Pasture management improved and livestock productivity (milk yields) gains have come from more supplementary feeding.

Policy makers are often concerned that major reforms will lead to widespread reductions in farm income and a contraction in the industry. This perspective takes a static view of farmer responses to changes in industry returns. Australian dairy deregulation demonstrates that producers are highly responsive to changes in economic circumstances caused by policy reform. They react by expanding the scale of the farm enterprise or making changes to gain productivity improvements

### **Early retirement and installation aid schemes in Ireland<sup>3</sup>**

#### ***The situation before the reform and the nature of the reform***

Poor age structure has often been recognized as a major problem for Irish agricultural development, coupled with low levels of appropriate education of many farmers. The Irish government has attempted to stimulate early retirement amongst older farmers and the transfer of their holdings to younger farmers. They also provide assistance to younger farmers when they take over the management of a farm.

There had been some kind of early retirement from farming scheme since the 1960s. The first was introduced in the Land Act of 1965. Later on, the scheme was operated under EC Directive 160 of 1975. These schemes were not very popular and the level of participation was low. OECD conducted a review of early retirement schemes for farmers in several OECD countries, including Ireland, in 1995 and attributed the low level of participation in the programs in many OECD countries to a number of factors including the low level of pension payments and onerous eligibility criteria. In Ireland, the recipients of the pension were required to relinquish their lands entirely. There were difficulties in the long term leasing of land that were not resolved until the Land Act of 1985. There was a need to introduce a more attractive retirement scheme, which would encourage farmers to cease farming and transfer their holdings to younger farmers.

The first scheme involving grants to young farmers was implemented in Ireland in 1986. It was intended to facilitate not only installation but also structural adjustment of holdings. Installation Aid for young farmers has continued in some form since then. There have been five developments of the scheme between its introduction in 1986 and the scheme that is presently in operation.

The first EU-financed early retirement scheme was introduced with CAP reform in 1992. During the 1980s, the EU struggled with various mechanisms to try to curtail commodity surpluses and reduce the growing budgetary costs of its agricultural policy. The first major reform to the CAP occurred as a result of the MacSharry reforms proposed in 1992 and implemented in 1994. The core of the reform was a cut of 30% in the cereal intervention price, phased in over three years, together with smaller cuts in the institutional prices for beef and butter. These reductions in support prices were compensated by a per hectare payment in the case of cereals, and increased premium payments for beef cows and cattle.

This reform also included three accompanying measures, including an early retirement scheme, an agri-environment scheme and a scheme for afforestation, designed to reduce production capacity and to improve the structure of farming. Member countries were entitled to introduce schemes for early retirement from farming which would be part financed by the European Agricultural Guidance and Guarantee Fund (EAGGF). The objective of the early retirement scheme is to facilitate structural adjustment following CAP reform.

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3. This case study is based on the report *The Scheme of Early Retirement from Farming and the Scheme of Installation Aid – Case studies for Ireland* by Paul Kelly which was prepared for OECD Secretariat.

The Agenda 2000 reform agreed in March 1999 was prompted by the need to prepare the CAP for the future enlargement of the EU to include the countries of central and eastern Europe. It included a reformulation of the aims of agricultural policy, to give greater emphasis to environmental policy objectives and the multifunctional role of farming. It also included the idea of an integrated rural development policy as a second pillar of the CAP. The scheme of early retirement from farming is one of the measures in Ireland's Rural Development Plan that forms part of the National Development Plan 2000-2006. The installation Aid scheme was also included in the rural development plan.

### ***Adjustment programme***

#### *The early retirement from farming scheme(ERS)*

The objective of the Early Retirement from Farming Scheme (ERS) is to provide an income for older farmers between the ages of 55 and 66 who decide to stop farming. The aim is for them to be replaced by farmers who are able to improve the economic viability of their holding, rather than simply increase its size. As explained above, the first ERS was introduced as part of the CAP reform started from 1994.

The main features of the 1994-99 Scheme (ERS1) were as follow

- It was open to farmers aged between 55 and 66 years old.
- Applicants had to have been farming for at least 10 years.
- Farming had to be the “main occupation” of applicants.
- The pension was IEP 96 per acre (EUR 301.90 per ha) per year.
- The maximum annual pension was IEP 9,510 (EUR 12 075), for a farm of 24ha or over.
- The pension was paid for a maximum of 10 years or up to the farmer's 70<sup>th</sup> birthday, (whichever came sooner).
- The minimum size of holding that could be transferred was 5ha of utilizable agricultural area (UAA), (farmable land not including roads and buildings).
- In order for the applicant to qualify for the pension, the transferee had to own at least 5 ha in their own right or expand the holding by 5 ha or 10% of the transferor's holding, whichever was the greater.
- The upper age limit for a transferee was 50.
- There was provision for a pension for workers or family helpers aged between 55 and 65. This pension was for EUR 4 830 per year subject to a maximum of two workers per holding.
- The scheme closed on 31 December 1999

The continuation of the ERS was implemented under the CAP Rural Development Plan, which applies from 2000 to 2006 and was introduced on 27 November 2000.

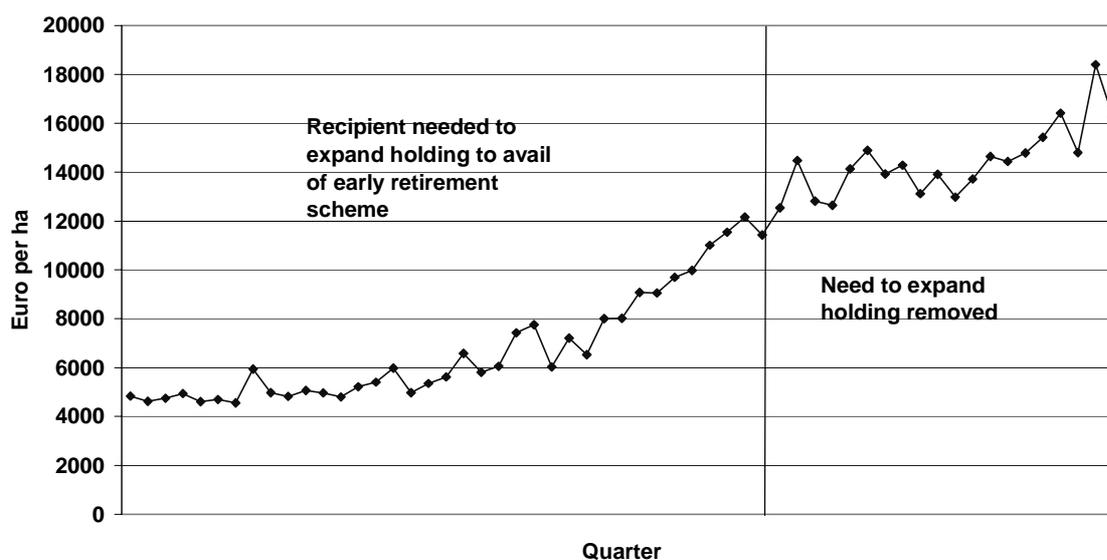
The main features of the 2000-2006 Scheme (ERS 2) are as follow.

- The retiring farmer must be between 55 and 66 years.
- The farming transferee must be between 18 and 45 for 2001, 44 for 2002, 43 for 2003, 42 for 2004, 41 for 2005 and 40 for 2006

- The duration of the pension must not be for more than ten years, with upper age limits of: 69 in 2001, 68 in 2002, 67 in 2003, 66 in 2004 and continuing at 66 for subsequent years.
- There is a flat rate pension of EUR 5 403 plus EUR 338 per ha, up to a maximum of 24 ha.
- The maximum pension is 13,515 Euro per year.
- The “National Retirement Pension”, if paid, is deducted from the Early Retirement Pension. The National Retirement Pension includes: old age pension, invalidity pension, retirement pension and survivors contributory and non-contributory pension.
- The transferee must have a minimum of 20 ‘Income Units’ from farming and a maximum of 100 ‘Income Units’ from non-farming activities<sup>4</sup>.

The main differences between ERS 1 and ERS 2 are (i) the amount of the pension, which was increased by 12%; (ii) the possibility for both applicants for the pension and the recipients of “pension lands” to be part-time; (iii) the reduction in the ages of both the transferor and transferee and (iv) the removal of the need for the transferee to acquire extra land. Other things being equal this would have decreased the upward pressure on land prices. However, there are many factors that influence the land prices and it is not clear how much this change has had an impact on land prices. A graph of land prices before and after the removal of this requirement is shown as Figure 11.

**Figure 11: Ireland, Agriculture Land Price (EUR per ha 1991-2005(q1) by quarter)**



4. The concept of the “Income Unit” is used to assess the farming income of the transferee. Some examples of one Income Unit are one dairy cow; 400 gallons of milk quota and one ha of cereals, peas, beans or set-aside. One ewe is 0.15 Income Units.

The actual expenditure on the first co-funded Early Retirement Scheme is shown in Table 5 and target and actual expenditure on the second co-funded Early Retirement Scheme is shown in Table 6.

**Table 5. Actual Expenditure on the Early Retirement Scheme (ERS 1) in Ireland 1994 to 1999**

Year	Actual Expenditure (million Euro)
1994	6.936
1995	35.152
1996	55.919
1997	72.451
1998	84.937
1999	87.049
Total	342.444

**Table 6. Target and Actual Expenditure on the Early Retirement Scheme (ERS 2) in Ireland 2000 to 2003**

Year	Target Expenditure (million Euro)	Actual Expenditure (million Euro)	Actual as % of Target
2000	96.2	90.876	95
2001	104.0	84.452	81
2002	108.8	82.309	76
2003	111.2	79.539	72
Total	420.2	337.176	80

The reasons why expenditure on the Early Farm Retirement Scheme has fallen short of the target could include:

- The uncertainty about the Scheme in relation to the agenda 2000 reform of the CAP.
- The pension may not be attractive enough in relation to the alternative sources of income available, particularly in a period of virtually full employment in Ireland.
- The pool of potential participants may be reducing.
- There have been unfavourable media comments about the Scheme.

#### *The Installation Aid Scheme 2000-2006*

The present Installation Aid scheme was incorporated into Ireland's National Development Plan 2000-2006. The overall aim of the present Scheme is stated in the National Development Plan as "tackling the general structural aspects of a strategy for agriculture and addressing one of the overall Plan's objectives of improving competitiveness in the agricultural sector." Four specific objectives of the Installation Aid Scheme are:

- To encourage young people to take up a career in farming;

- To ensure that such young people reach a high standard of agricultural education within a reasonable period following the date of set-up;
- To defray the set-up costs of eligible applicants setting up in farming for the first time during the period of operation of the Scheme;
- To make provision, in certain limited cases, for an element of working capital for farmers who are eligible to participate in the Scheme.

The scheme provides a flat one-off premium of EUR 9 525 and is open to both full-time and part-time farmers. The present Installation Aid Scheme has had two versions. The first version was introduced in February 2001 and was made available to young farmers who were deemed 'set-up' in farming on or after 1 January 2000. The uptake of this Scheme was lower than had been hoped and the conditions were relaxed in a second version of the Scheme, introduced on 7 May 2002.

To qualify for 'version 1' of the Scheme, applicants had to comply with the following provisions:-

- Be between their 18<sup>th</sup> and 35<sup>th</sup> birthdays at the date of 'setting-up';
- Confirm that setting-up costs associated with the farm transfer, including stamp duty, legal and accounting fees or family settlements, remained to be discharged;
- Be first as a sole user of a herd number or other Department of Agriculture identifier after the date of setting-up, (this provides proof that they had started farming on their own account).
- Submit an initial application within four months of taking over the farm;
- Fulfil stated requirements of levels of occupational skill and competence at the date of setting-up, or at the latest within two years of that date;
- Have at least 50 income units (IUs) and not more than 150 IUs including off-farm income at the date of setting-up, or at the latest within two years of that date. At least 20 of the IUs had to come from farming;
- Farm in accordance with the principles of Good Farming Practice;
- Submit their applications with supporting documentation within 30 months of taking over the farm;
- In cases of joint ownership or leases 'jointly held' and where the application was by only one of the parties, the application had to be accompanied by a signed consent to a single payment on the holding by the other party or parties.

When the Scheme was originally introduced in 2001, sufficient funds were allocated to allow for the payment of about 570 applications per year for the duration of the Scheme. However, by the end of 2001 only 59 applicants had been paid under the Scheme. The reason put forward for this was the upper income limit of 150 IUs. Proving this on the basis of income and taxation amounts agreed between the applicant and the taxation authorities was bureaucratic and slow. The imposition of an upper limit on income also had the effect of possibly penalising the most economically viable farms. In some cases partial transfers of land were carried out in order to ensure that the income did not exceed 150 IUs. This was the direct opposite of the policy objective of creating larger, more viable units.

As a result of these observations, the Scheme was revised and a second 'version' put in place in May 2002. This version of the Scheme continues to the present time. The main revision to the first version of the Scheme was the removal of the upper income limit of 150 IUs. There is also change in the eligibility provisions in relation to income. Under previous Schemes, Man Work Units were equivalent to Standard

Man days. In the present Scheme income is presumed to flow from the practice of certain enterprises in the same way as for the Early Farm Retirement Scheme described above. For example in the case of milk, 1 IU is equal to 1 818 litres of milk quota, and in the case of sheep, ewes are defined as 0.15 IUs. Where farmers had less than the minimum requirement of 50 IUs at the date of setting-up they were given a further two years to reach the required level. The degree of agricultural skill and competence was similar to that required under earlier schemes.

### ***The result of the programs***

#### *Land transfer*

According to the Mid-term evaluation of the CAP Rural Development Plan, 1 257 retirees had availed of the measure compared to a target for the period 2000-2006 of 8 300 (15%) as at 31 December 2002. Land released under the measure was approximately 40 000 hectares compared with a target of 265,000 over the life of the programme (15%).

In terms of land consolidation the ERS does show some positive impact with an increase of 29.7 hectares in the average size of the holding of the transferee after transfer. The average farm size of transferees merged holding was 61.4 hectares compared to an average national farm size of 31.4 hectares. This figure seems to show that this program has greater impact in the more intensive and better-developed farming areas where the benefits of larger farm units are more pronounced. There is a much lower uptake in the less intensive areas. In these areas, the option of part time farming and/or availing of other direct payments may be more attractive to farm owners.

The percentage area of land transferred by lease in 2002 had increased was 68.7%, an increase of 18.7% on the 2000 figure. The transferors are demonstrating a desire to retain ownership of their lands rather than selling them. Leasing the land allows more young farmers to participate in the scheme, as it is more affordable to lease than raising the money for a purchase.

#### *Age structure*

There is the significant increase in the percent of transferors in the 55-59 years age bracket between 1997 and 2002; 37.4% to 61% with a corresponding decrease in the other two age groupings of 60-64 and 65-70. The average age of the transferor in 2002 was 59 years, a decrease of two years from a national average of 61 years recorded in 1997.

**Table 7. Average age of transferors in Early Retirement Schemes**

<b>Retirement age</b>	<b>31/12/02</b>	<b>1994-1997</b>
55-59 years	61%(763)	37.4%
60-64 years	34%(426)	46.9%
65-70 years	5%(68)	15.7%

The average difference in age between transferor and transferee was 28, which is the target for the measure. This is a reduction of two years, from the 30 years recorded in the 1994-1997 period. Worth noting is the change in age profile within the different age categories, for example transferees under 25 years fell from 20% to 15% whilst those between 25-35 increased from 55% to 57% and those over 35 years increased from 25% to 28%. Such trends indicate the unlikelihood of reaching the 2006 target and would suggest that this aspect of the current ERS be re-visited.

### *Regional disparity*

In both ERS and the Installation aid scheme, there is significant variance in the level of uptake on a regional basis with more uptakes in the South East region than Border, Midlands and West (BMW) regions. Farms are generally smaller and farm incomes lower in the BMW region than in the South East region.

This regional variation in the uptake in the ERS has been attributed to the size restriction on holdings eligible under the ERS, the unavailability of natural successors and lack of off-farm employment sources available to potential transferees in more peripheral rural locations.

The differential rates of take-up of the Installation Aid scheme suggest that the economic viability of a farm has an influence on whether young farmers are willing to set-up in a region. In areas where the income from farming is not very attractive relative to the alternatives that are on offer, the grant available under the Installation Aid Scheme is not sufficient to entice the same proportion of prospective beneficiaries to enter farming

### *Farmers education*

Almost 1 300 applicants had benefited under the current Installation Aid Scheme, (both Versions I and II) by the end of 2003. In Ireland the conditions for eligibility for the Installation Aid Scheme were relatively restrictive at the outset and then relaxed to encourage up-take as the numbers of applicants were below the targets that were set.

A major effect of the Installation Aid Scheme in Ireland has been to increase the education of farmers. As the receipt of the grant of Installation Aid is linked to the attainment of certain educational qualifications, it provides a clear incentive to avail of these educational opportunities. The level of attainment of educational requirements by beneficiaries by region is shown in Table 5. The demand for Certificate in Farming courses declined in the periods when the Installation Aid Scheme was suspended.

**Table 8. Attainment of Education Requirements by Beneficiaries by Region.**

<b>Indicator</b>	<b>South East Region (end 2002)</b>	<b>BMW Region (end 2002)</b>
% of beneficiaries with Certificate in Farming	84.8	79.5
% of beneficiaries with 180 hours training	13.1	15.8
% of beneficiaries with at least 5 years experience	90.0	81.5

### *Conclusion*

The overall objective of the ERS is to provide an income for older farmers who decided to stop farming and the aim is for them to be replaced by farmers who are able to improve the economic viability of their holdings. The average pension for the period to 31 December 2002 was EUR 12 750 compared to an average of EUR 10 794 for the period 1994-99. The adequacy of the amount of the pension is a key element in assessing the effectiveness of the ERS and the absence of indexation is a major weakness in the measure. It seems that this is one of the reasons for low uptake. At national level the low uptake and pronounced regional imbalance in uptake does suggest that the impact of the measure as national level will be less than envisaged.

Even without incentives a certain number of farmers will give up farming and pass their farm over to an immediate family member. The question of to what degree this program accelerates the retirement process is difficult to assess and in the absence of a special survey there is no definitive data available to answer this question.. It is likely that the measure is financing some transfers that would anyway have occurred. Nevertheless, it is true that, to some extent, this program has accelerated the retirement process and has facilitated structural adjustment.

The Department of Agriculture and Food of Ireland has published an Expenditure Review of the Early Retirement Scheme, which has concluded that “recent studies have shown that the Scheme has had little effect on the structure of Irish agriculture”. If this is the case, a thorough review of the scheme would be warranted.

In relation to the Installation Aid Scheme, there is undoubtedly a large deadweight element, as many and probably most, of the recipients of the aid would take over the farm in any event. The level of the payment is probably not sufficient to be a key factor in determining whether a person would or would not enter farming. A main contribution of the scheme appears to be that it encourages participation in education by people who will take over farms. A simpler way to achieve this goal would be to simply pay farmers a grant on the completion of an educational course. Increased participation in agricultural education should certainly increase the quality of the labour and management resource on farms.

There may also be an issue of integration and consistency between these programmes, as one favours exit from the sector and the other is implemented to attract labour into it. These two schemes could complement each other in the sense that both schemes aim to increase the number of young farmers in the sector. However they are separately managed and there are separate conditions for eligibility, such as the definition of what constitutes a ‘young’ farmer. Furthermore, it seems that there is a possible inconsistency between the objectives of the two programs—one designed to remove labour from agriculture in order to improve economic viability for those who remain in the sector by, in the case of Ireland, increasing the farm size and the other, designed to attract labour into the sector. They should, therefore, be more closely integrated both in terms of their objectives and of scheme terms and conditions.

### **Some findings**

In the introductory section the scope of this report was defined as relating to policies that have been explicitly put in place to facilitate the adjustment processes triggered by specific reform initiatives. Broadly, two types of measures are covered: those that assist producers to exit the industry or to diversify into non-agricultural activities; and those that aim to improve the competitiveness or viability of those who stay in the sector. Job training, exit grants, and early retirement programmes belong to the first category. Capital grants, technical assistance or farm business training belong to the latter.

In practice, policy packages actually implemented by governments to accompany reform initiatives may contain both types of measure. Reform packages also sometimes offer support that is conditional on continuing production of specific commodities or continuing use of specific factors of production. This type of measure does not belong in the adjustment category as defined for this project. Rather these measures aim to reduce the social cost associated with reform. However, such measures may impede or slow down the adjustment that would otherwise have occurred. Nonetheless, some of the policy packages mentioned contain such measures alongside others that are within the defined scope. When this is the case reference to the package of measures has been retained.

Support that is granted in the context of a reform initiative is often referred to as compensation. For the purposes of this study, only compensation payments that are totally unconditional in the sense that the recipient is free to take the payment and exit the sector if he so wishes belong in the definition of an

adjustment measure. “Compensation” payments that are permanent and/or coupled to production or factors of production do not belong in the adjustment category. These and other issues relating specifically to compensation will be taken up in more depth under the 2005-06 programme of work.

The OECD has been engaged in a study on Trade and Structural Adjustment, developed from a Swedish proposal at the OECD Ministerial Council Meeting in 2003. Along with a number of other sectors (fisheries, textiles and clothing, steel, shipbuilding, motor vehicles, health services and international sourcing of IT and business process services) agriculture has featured prominently in that study. A number of case studies were undertaken in which the adjustment behaviour of the sector in response to a change in the trade regime was catalogued and assessed. The merits of different approaches taken by government to assist the adjustment process were also studied. These case studies concerned Mexico-US avocado trade, the Australian dairy industry reform (also studied here), the agro-food sector in Chile, cut flowers in Kenya and agricultural reform in New Zealand. From these and other sectoral case studies, good practice recommendations have emerged, addressed to both developed and developing country governments, and indicating a broad spectrum of ways in which the benefits from reform and resulting adjustments can be optimised. Among these recommendations are several that relate specifically to the design and implementation of adjustment policies, should they be deemed necessary in a given situation as follows:

“Adjustment policies should:

- Rely, wherever possible, on generally available adjustment measures, including through the social security and tax system, in order to help improve the benefits from openness while reducing adjustment costs.
- Ensure that targeted adjustment measures, should these be considered necessary for reasons of political economy, are:
  - Time-bound, with a clear exit strategy.
  - Decoupled from production.
  - Aimed at re-integrating displaced workers into the workforce.
  - Compatible with general safety net arrangements.
  - Cost effective.
  - Transparent and accountable.”

The findings from the cases that have been described for this report confirm and complement those developed in the context of the Trade and Structural Adjustment Project mentioned above, while allowing the further elaboration of some best practice recommendations that are more specific to the agricultural sector, which is one of the most highly supported and protected sectors in many countries.

While reduction of distorting support indeed presents severe challenges to industry and government alike, it also generates new opportunities. The case studies conducted here demonstrate the potential of producers to transform changing conditions into new opportunities. In the case of beef liberalisation in Japan, farmers responded to trade liberalisation by shifting to more value added products, and decreasing cost by expanding farm size. They also began to develop export opportunities. In the Canadian case, when subsidies on grain transportation were removed, farmers and others in the industry responded quickly to market signals through diversification of crop patterns, an increase in livestock production, and investments in value-added processing. In the Australian dairy case, some farmers left the industry, milk production shifted location to some extent, while other farmers responded by increasing farm size and

reducing costs. In Ireland, implementation of the early retirement schemes has somewhat accelerated the retirement of older farmers and their replacement by more viable young farmers.

The reluctance of governments to undertake reform suggests that they may have underestimated this adjustment potential. The first conclusion to emerge, therefore, is that governments should take the adjustment capacity of the sector more fully into account when designing policy reforms. This means that adjustment packages need to be designed to unleash the potential of the private sector to create new opportunities in response to changing conditions.

Second, adjustment policies should be well targeted to specific adjustment aims and intended beneficiaries. Consideration needs to be given as to whether up or downstream industries should also be included in adjustment measures or whether economy-wide measures relating to reconversion or redeployment of the resources tied up in affected industries are sufficient. More generally, from a political economy point of view, the equity issue relating to who gets assistance and who pays, needs careful consideration in the design of any adjustment package.

It is clear that adjustment measures to be effective should be strongly decoupled from production of specific farm commodities or utilization of specific farm factors. In the same context, targeting is important. In the Japanese beef liberalization case, government supports calf breeding farms by setting a floor price for calves. The result was to increase the price of new born male dairy calves. Most of the assistance accrued therefore to dairy farms. The result has been to perpetuate uncompetitive production of a type of beef that was not, in fact, the targeted sector.

It is also important that when designing several programs for adjustment, these programs should be mutually consistent and integrated. In the Irish case study, the early retirement scheme and Installation Aid schemes are not fully integrated. Generally, a single, well designed scheme would ideally include coordinated and consistent entry and exit elements, while, as has already been noted, if the objective is educational, it would be much more effectively met through a specific, targeted measure.

Thirdly, programmes should be time bound from the outset. If not the risk is that they prevent the adjustment they were designed to facilitate. A programme that compensates farmers for the fall in prices or revenues resulting from reform or liberalization beyond the short term may have exactly the opposite impact to that intended. Moreover, such programmes are extremely difficult to terminate. If they continue in place for a long time they may create new distortions. This would seem to have occurred in the case of Japanese beef.

Fourthly, all adjustment programmes should include a clear exit component. This element has been somewhat neglected in some of the adjustment policies identified or studied here. Yet, concerns that farmers will be forced to exit the sector in financial distress often put a break on policy reform or trade liberalization efforts. Explicitly recognizing this and putting measures in place to ease the process will increase the success of an adjustment package. Enabling those who cannot be competitive to exit the sector through retirement is one possible strategy. In this context we have seen examples of integration of farm families into economy-wide safety net mechanisms and there are also examples of farm specific retirement programmes. One-off lump sum payments conditional on leaving the sector have also been used. Finally, skill enhancement aimed at increasing the capacity of the exiting farmer to take up a different activity is another possible element in a comprehensive adjustment package.

Many adjustment programmes aim to assist producers to remain in the sector by improving their viability or competitiveness. Care should be taken that they are not encouraged to diversify into sectors or activities that are themselves still the subject of significant support. The success of individual measures will depend crucially on the characteristics of the sector in question and the nature and quality of the

resource base. Governments have a wide panoply of measures to choose from, some directed to individual producers and other providing more general types of assistance. Among the former, governments have used education and training, debt restructuring, grants, and different forms of technical assistance. Among the latter, infrastructure development, quality improvement schemes, marketing and promotion have figured. Government interventions should always be designed to trigger and support the considerable potential of individual actors to adjust, that has been observed in different situations and should not interfere in the range of choices open to them.

For any adjustment process to be successful it is important for those affected to believe in the irreversibility of the policy changes being made and in the time-limited nature of the assistance measures being offered. Clearly, one-off measures or multi-year schemes with provisions known in advance will be more plausible than year by year decisions. Governments therefore need to be clear and transparent about their intentions and, in so far as political processes allow, should hold firm to the reform and adjustment measures as originally announced. The prior planning and consultation process should be managed so as to limit the risk of moral hazard or adverse selection.

A striking feature of several of the case studies presented here (and in TASAP) is the extent to which the governments involved have engaged in in-depth studies, both in advance of undertaking a reform, and during and following the adjustment period. This has helped to anticipate the effects of the reform envisaged and, by so doing, to identify where the adjustment pressures were likely to arise and who was most likely to be affected adversely. This, in turn, allowed the design of adjustment measures to be a well informed and targeted process. Although it is impossible to accurately anticipate all the impacts, the risk of over-compensation or that adjustment funds reach unintended beneficiaries will be greater in the absence of preparatory research. It is also better to try to anticipate the impact of reform on other sectors and to be aware that other social or environmental costs may arise. Continuing evaluation during and after programme implementation also emerge as important factors allowing lessons to be learned and applied in modifying programmes or when reform efforts are extended to other sectors. Finally, a well functioning consultation process involving potential gainers and losers from the reform process would also seem to be important in ensuring that desired adjustments actually occur.