CHAPTER ONE

Food and Agricultural Policies, and Trade: Agriculture and Agribusiness Environments

If money could have solved the farm problem we would have solved it a long time ago.

President Ronald Reagan

1.1 The Scope of Food and Agricultural Policy

Historically, books on agricultural policy restricted the discussion to farm programs that impacted the agricultural industry. However, agriculture is impacted by many forces outside the purview of farm programs. For example, U.S. agriculture was impacted greatly by the U.S. energy policy where subsidies were provided to produce energy from corn. Food policy that restricts the consumption of certain foods impacts agricultural resources. Trade has a major impact on agriculture worldwide. Agricultural policy, as we know it, is highly intertwined with trade. For example, the U.S. tariffs on Chinese goods and China's response have caused many U.S. commodity prices to plummet, especially U.S. soybean prices. At least part of the hurt on U.S. farmers was offset by the U.S. farm policy programs.

1.2 Agricultural Policy and Budgetary Outlay

Agricultural policy, which has provided large income support to farmers, is about how governments influence agriculture and how agricultural sectors influence governments. In some countries, such as the United States, agricultural policy is set in legislation. The United States is required to pass a farm bill every five to six years. Since the first U.S. farm bill passed in 1933, agricultural policy has changed markedly. For example, the U.S. 1996 Federal Agriculture Improvement and Reform (FAIR) Act eliminated target prices and acreage set-aside requirements, but these were later reinstituted. Every few years in Canada, several new safety-net programs are instituted for grain and oilseed producers. The European Union (EU) made drastic changes in its Common Agricultural Policy (CAP) by introducing a single-farm payment scheme (SFPS) consisting of decoupled farm payments which, in theory at least, do not influence production decisions.

The developing countries spend significant amounts of money on supporting farmers, compared to many developed countries that allocate large sums of money to government programs. For example, in the United States, USDA heavily supports the U.S. school lunch

program and the Supplemental Nutrition Assistance Program (SNAP). For example, in 2018, only 30 per cent of the USDA budget was spent on U.S. farm programs.

A newer area of agricultural policy deals with aquaculture, which is the commercial farming of all types of seafood products in marine and fresh water environments for human (and animal) consumption. Over time, aquaculture has become a major agricultural industry worldwide. In the global aquaculture market, China is the major exporter and the United States is the major importer of aquaculture products (Asche, Anderson, and Garlock, 2019)

As agricultural markets expand globally, agricultural policy must take into account the World Trade Organization (WTO). Simply put, the WTO deals with the rules of trade between nations at a global or near-global level. The WTO is a rules-based, member-driven organization, where all decisions are made by the member governments, and the rules are the outcome of negotiations among members. The WTO began life on 1 January 1995, but its trading system is half a century older. Since 1948 the General Agreement on Tariffs and Trade (GATT) has provided the rules for the system. Often, farm programs are in violation of WTO guidelines. As of 2016, there are 164 member countries. Sometimes, there are conflicts between member states' individual programs and their international obligations as members of the WTO (Sumner 2005).

WTO Commitments

There is a strong argument that the United States has been and will be in violation of its WTO commitments regarding the overall level of trade-distorting subsidies … U.S. farm programs for a variety of commodities may be suppressing market prices in violation of the WTO Agreement on Subsidies and Countervailing Measures … U.S. subsidies depress world corn prices by six to nine percent and world rice prices by four to six percent … U.S. programs need a major overhaul to bring them into conformity with international obligations (Sumner 2005: 1).

Through agricultural legislation, support for the farm sector worldwide has been substantial. The European Union leads the pack, followed by the United States. Support for EU agriculture increased significantly between 1985 and 2005. In terms of producer subsidy equivalents (PSEs), as measured by the Organization of Economic Co-operation and Development (OECD), the European Union alone transferred almost U.S. $150 billion to producers in 2004 (Figure 1.1).

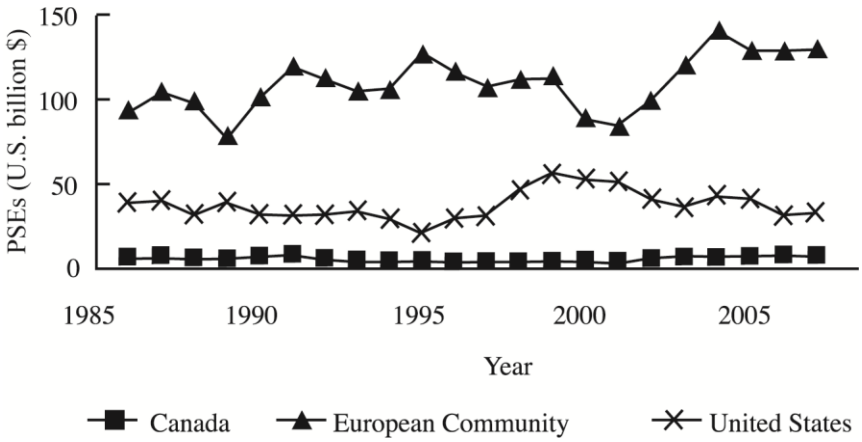

Figure 1.1. Total producer subsidy equivalents (PSEs) for selected countries, 1986–2007
Source: OECD, Main Economic Indicators (1986–2007)

Under the Common Agricultural Policy, EU farmers continued to receive large subsidies. For example, the EU agricultural budget in 1986 was European currency unit (ECU) 22.9 billion, while in 2006 it was € 49.9 billion (Figure 1.2). Anderson and Josling (2007: 1), who are critical of the CAP, make the following observation:

> The CAP born of painful political compromise, proved an inflexible instrument for the encouragement of modern agriculture. Costs continued to grow relative to benefits throughout the 1970s and beyond. Costs were imposed not only on EU consumers, taxpayers, and non-agricultural industries, but also, through its depressing impact on international food prices on farmers in many other parts of the world. Starting in the early 1990s, the CAP evolved in a significantly different direction … The 1992 reforms, followed by further changes in 1999 and 2003, shifted the main focus of support in two important ways: to direct payments, which were less distortionary, and to the encouragement of the production of higher quality food, for which affluent consumers in Europe and abroad were able to pay a premium.

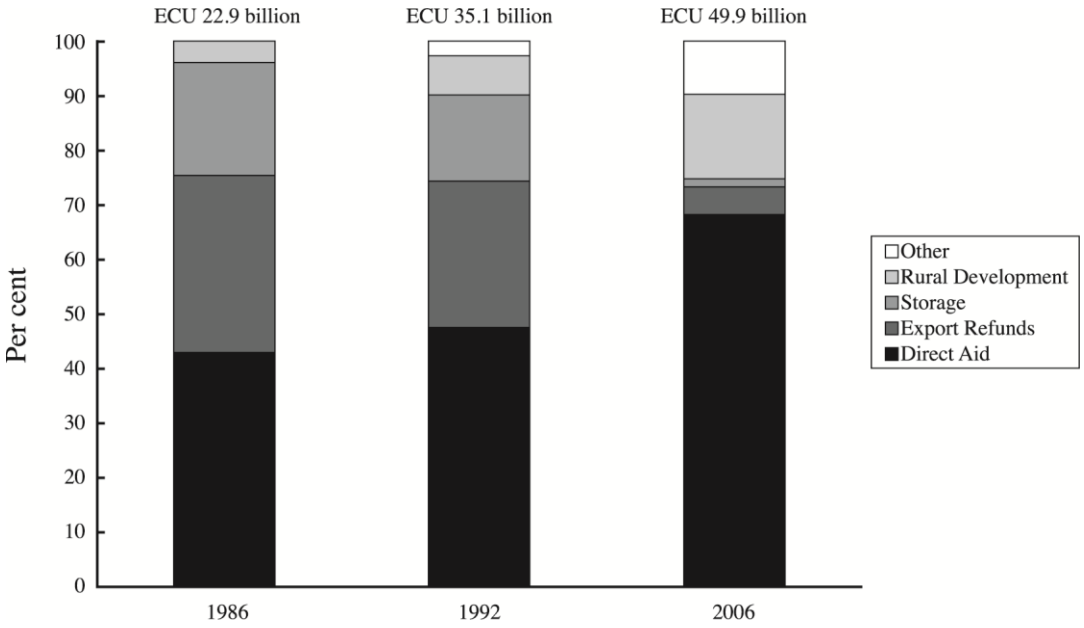

Figure 1.2. The changing structure of total CAP spending
Source: Ackrill, Kay, and Morgan (2008).

1.3 Agriculture and Its Changing Nature

1.3.1 Importance of Agriculture

In most developed countries, agriculture has declined in importance in terms of its share of the gross domestic product (GDP) – a measure of the monetary value of the goods and services becoming available to the nation from economic activity – and in terms of its proportion of the labour force. Agriculture does, however, play an important role in some sectors, such as trade. In the 1990s, for example, Canada had about 20 per cent of the international wheat market and 65 per cent of the world durum and canola markets. In 1997 agricultural exports comprised about C $20 billion, even though agriculture was only 2 per cent of the Canadian GDP. Whereas only 2.7 per cent of the labour force is involved directly in agricultural production in Canada, the impact on employment becomes much larger when this is combined with food processing; we are then considering 15 per cent of the Canadian labor force (Bollman, Whitener, and Tung 1995). Although agriculture in many countries is decreasing in economic importance and the number of farms is declining dramatically, there is still considerable debate on what to do with the farm sector. In some countries, government support for agriculture has not diminished. It has, in fact, increased.

1.3.2 Agriculture Continues to Change

Many changes have occurred in agriculture, and these must be taken into consideration when designing farm policy. For example, technological change has resulted in the ability of individual

farmers to operate large farms. Consequently, farm size has increased dramatically since the early days of land settlement in North America.

1.3.3 Who Is a Farmer?

Before we can discuss the farm problem and its possible solutions, we need to define *farmer*. A farmer may be anyone, say, a doctor, lawyer, or accountant, who owns and/or is a partner of the person who used to be the single owner and operator of the family farm. The term *farmer* includes producers of many different products and, accordingly, many different producer groups, which makes it impossible to make sweeping generalizations about the effects of any given agricultural policy. The structure of agriculture has changed dramatically and has become more diverse. Gone are the days when most farmers passed their land on to their sons and daughters in anticipation that they would become the next generation of farmers. When examining the impact of agricultural policy, it is important to recognize that land transferred to heirs is often rented by farm operators who may actually own very little farmland.

Within the farming community, there is a wide diversity in the types of farmers, ranging from those who are wealthy to those who are living below the poverty level. This, too, makes policy design difficult. Who should be the target of agricultural policy? Should policy be targeted at all? If policy is to be targeted, should it be aimed at poverty-level farmers? Should policy facilitate the exit of low-income farmers from agriculture?

One of the most striking structural changes in the agricultural sector is the increase in off-farm income received by farm families. (Despite the record low grain prices in the year 2000, farm bankruptcies in North America remain relatively low. Part of this can be explained by the fact that farmers use off-farm income to offset their farm losses.) In 1996 U.S. off-farm income constituted more than 60 per cent of the average farm-family income in all states (Hoppe et al. 1996). Interestingly, in 1996 farmers in both the highest and lowest income classes had off-farm income of around U.S. $35,000. Off-farm income has the effect of both increasing and stabilizing farm-family income.

The profile for agriculture depends on what definition is used for the term *farmer*. If so-called hobby farmers are included in the definition (i.e., those whose income from farming is small relative to their total income), U.S. average farm household income will equal or will exceed the national average household income of non-farm families (Offutt 2000). However, if a more narrow definition of the term *farmer* is used, in which farm households include only those whose major source of income is farming, this may no longer be true. This distinction may have a bearing on the extent to which farm programs are targeted to specific types of farmers.

1.3.4 Who Owns Farmland?

The ownership of farmland is a political red flag that endures within agricultural policy debates. This situation has developed because, in many cases, the settlers who came to North America

from abroad had been landless peasants who associated economic and political freedom with the ownership of farmland. In the United States, they have tilled their own soil and have reaped their own rewards. In the past fifty years, however, ownership of farmland has become increasingly separated from the farm operator. Often, operators, who do not own the land, toil but do not reap the rewards of their labour. Instead, it is the owner of the farmland who gleans the benefits of high crop prices and agricultural supports. But the owners of farmland also suffer large financial losses during periods of low farm prices.

Land ownership has been changing, and so has the complexion of land rental arrangements (Table 1.1). For example, 54 per cent of Iowa farmland was owned by the farm operator in 1982. This decreased to 31 per cent by 1997, and continues to decrease. Also in 1982, 21 per cent of the land was leased on a cash-rent basis; by 1997 this had increased to 35 per cent, and continues to increase (Fukunaga and Huffman 2008). Many argue that any attempt to support farm income through price supports will fail because the benefits will be passed to the landowner and not to the actual farm operator. The increasing separation between landowners and farm operators is one of the major stumbling blocks for policymakers when they try to design farm policy.

Table 1.1. Tenure of operators of Iowa farmland, 1982 and 1997

	Percentage of Farmland	
Tenure	1982	1997
Operated Solely by Owner	54.1	30.8
Operated by Owner with Help	0.9	7.8
Operated under Cash-Rent Lease	21.1	34.9
Operated under Crop-Share Lease	21.1	23.7
Operated under Other Lease Agreement	1.0	2.8
All Others	2.7	0.0

Source: Pieper and Harl (1999).

1.3.5 Farm Consolidation

Farms have become fewer in number and larger in size. Since the late 1930s, the number of farms in Canada has decreased by roughly 500,000 (Figure 1.3). Corresponding to the decrease in farm numbers has been the increase in farm size. Since the 1930s farm size has increased roughly fourfold. The United States is experiencing this same consolidation. Also, wage rates have increased, and capital has continued to substitute for labour. In the 1980s and 1990s, for example, many grain farmers changed their technology in favour of four-wheel-drive tractor units and the corresponding complement of larger machinery. This increased the productivity of farm labour by roughly 50 per cent (e.g., in 1950 one farmer in the North American Grain Belt could plant between 80 and 100 acres of wheat per day; by 1999 this same farmer could plant easily over 300 acres per day).

U.S. Farm Consolidation

How extensive is the wave of consolidation sweeping U.S. agriculture? Just after the Second World War there were nearly 6 million farms in the United States. By 1997 that number dropped by two-thirds, to about 2 million farms. In the past decade, the number of farms has fallen by about 7 per cent. So, the decline in farm numbers is continuing, but at a slower pace. Of course, the rate of decline in 1998 and 1999 might have been faster and, if hobby farmers and retirees were excluded from the data, the numbers would certainly decrease further. Within agriculture, some sectors are undergoing more dramatic consolidation. The hog industry is a good example. Since 1970 the United States has lost about 85 per cent of its hog farms. In this case, the decline appears to be continuing as strongly as ever. The decline in the number of hog farms has nothing to do with a decline in pork production. In fact, since 1970, pork production has risen by 16 per cent (Lamb 2000: 23–4).

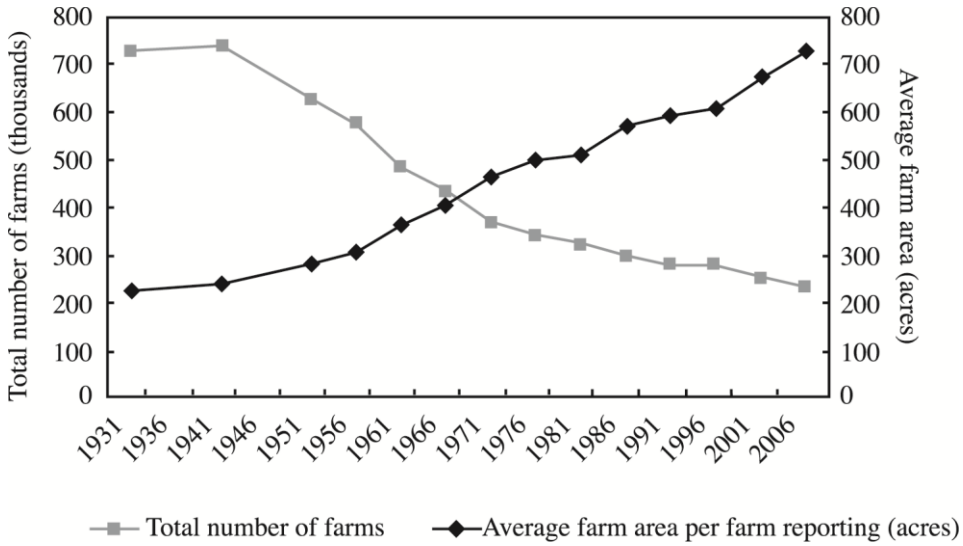

Figure 1.3. Farm numbers and farm sizes in Canada, 1931–2006
Source: Statistics Canada, Census of Agriculture (2007).

Despite such consolidation, net farm income before farm subsidies are taken into account has been negative for extended periods in Canada and the United States. In Canada, net farm income peaked at more than C $6 billion in the early 1970s, and then fell to an all-time low of less than C $2 billion in 1991 (Figure 1.4). In the United States, net cash-farm income peaked at U.S. $80 billion in the mid-1970s, and then fell to an all-time low of roughly U.S. $30 billion in 1999. There has been an increase in farm subsidies in both countries to offset falling farm incomes, but relative to the United States, subsidies in Canada are lower.

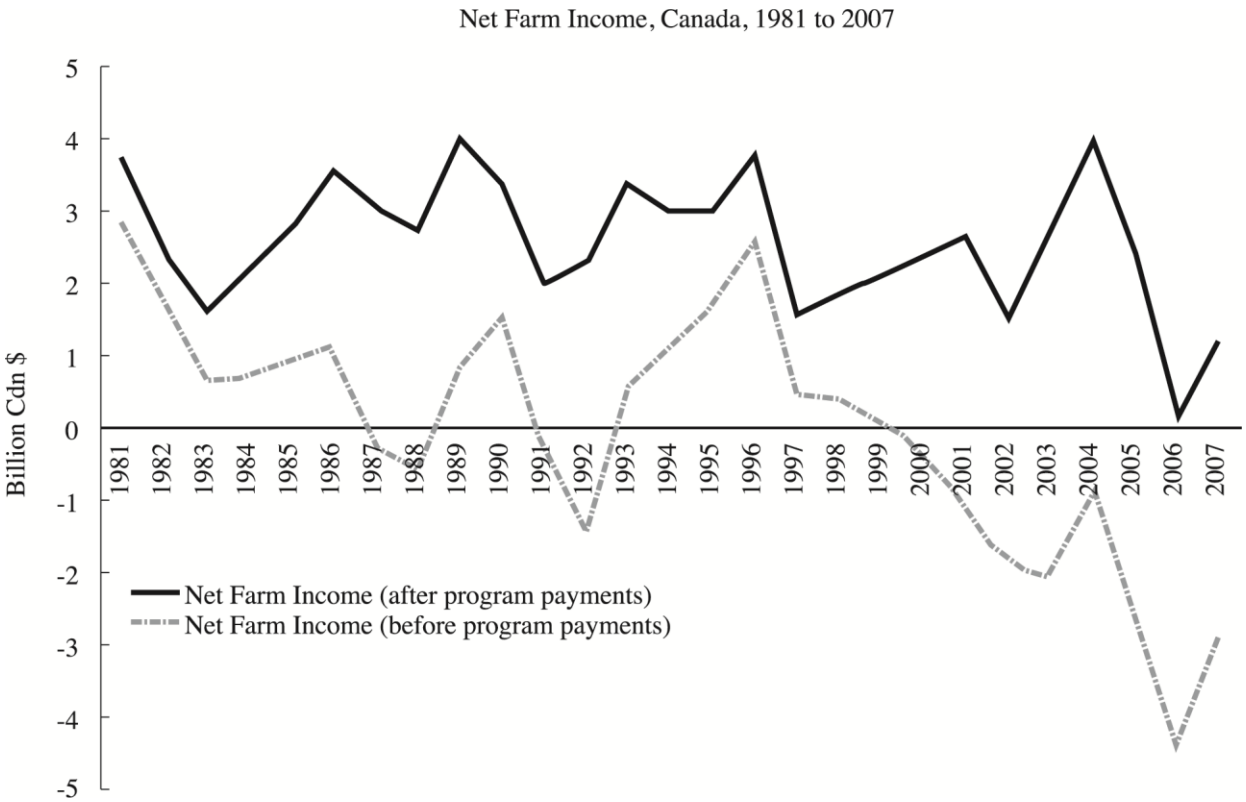

Figure 1.4. Canadian net farm income, 1981–2007
Source: Statistics Canada (2007)

1.3.6. Water and Urban-Rural Land Use Conflicts

Mark Twain reportedly said: 'Whiskey is for drinking; water is for fighting over.' This still holds true today. Irrigated agriculture is widespread throughout the United States and without irrigation many crops would not be grown. For example, it is likely that little cotton would be grown in California or Arizona were it not for the development of irrigation. Water is in extremely short supply, and competition for it has intensified because, at least in the United States, water for agriculture is subsidized, which is responsible partly for alleged trade distortions caused by U.S. policy. Agricultural water use competes with the demand for water from urban-residential areas. Thus, there is a conflict between urban development and land used for agriculture. More and more farmland is being priced for urban real estate development.

1.3.7 Carbon Sequestration and Climate Change

Carbon sequestration is linked to climate change. Saskatchewan farmers, for example, already have sequestered considerable carbon in soils by adopting measures such as reduced tillage, continuous cropping, conversion of annual cropland to perennial grasses, and tree planting. Estimates vary on the amount of carbon sequestration generated from agriculture. Continuous

cropping and reduced tillage could sequester up to 0.5 tonnes (2,206 pounds or tonnes) of carbon per acre, per year; however, a more realistic average is around 0.2 to 0.3 tonnes. For Saskatchewan alone, given roughly 40 million acres of farmland used for annual crops, the sequestration potential could be more than 20 million tonnes per year.

1.3.8 Genetically Modified Organisms

More and more of U.S. agricultural products are genetically modified (GM). However, the growth in the adoption of GM plant varieties has slowed considerably. Major U.S. crops, such as wheat and rice, used for human consumption are not genetically modified. Parts of the world are continuously plagued by plant diseases. For example, in the U.S. state of Florida, citrus production has declined drastically due to citrus greening. Some plant breeders believe that the only solution is to use at least partly GM citrus varieties such as combining biotechnological conventional and transgenic (GM) breeding (Grosser and Dutt 2017). This approach presents problems for companies who rely on international sales in countries where GM products are banned (Zilberman 2019).

1.4 Instability and Uncertainty in Agriculture

Farm commodity prices and incomes are highly variable mainly because of changes in international supply and demand that result from changes in weather and agricultural policies. Price variability and declining real commodity prices are illustrated for Canadian wheat. The price of wheat in 1981 deflated dollars, for example, was C $446 per tonne in 1917, which dropped to below C $10 per tonne in the early 1930s and increased to roughly C $350 per tonne in the mid-1970s, only to fall to below C $10 per tonne in 1998. The real price of wheat fell throughout most of the twentieth century.

Crop prices are highly variable in the United States. From 1972 to 1979 the variability in U.S. crop prices was four to ten times that during the period 1955 to 1963. Prices were relatively stable throughout the 1990s and into the 2000s. However, instability reared its ugly head in 2005. Corn and wheat prices roughly tripled between 2006 and 2008, only to collapse at the end of 2008 (Figure 1.5).

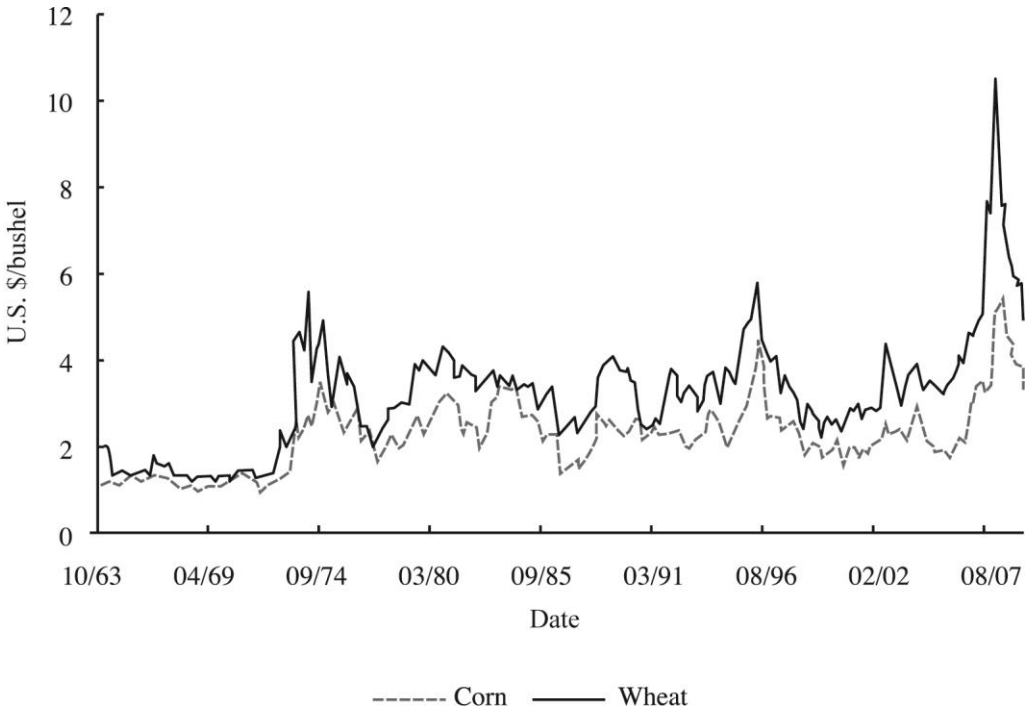

Figure 1.5. U.S. corn and wheat prices, 1969–2008
Source: NASS/USDA (2008).

Instability in U.S. Agriculture

In an economy with free markets, agricultural prices are unstable because of the inelastic nature of the supply and demand curves. From the 1930s to the 1960s agricultural instability in the United States was concealed by government programs, which shielded farmers by holding domestic commodity prices above the world market prices. During the 1970s, price variability increased substantially. The following data indicate the magnitudes of the fluctuation in prices.

From 1955 to 1963 farm prices and incomes were relatively stable in the United States. The years between 1964 and 1971 marked a transition period during which crop prices remained stable but livestock prices were more variable.

From 1972 to 1979 crop-price variability was four to ten times that of the 1955-to-1963 period. The variability of livestock prices also increased but at a lower rate than for crop prices. However, income variability was reduced through increased government payments.

From 1980 to 1995, income variability increased, and prices became less stable, which was a direct result of the inflationary period of the 1980s. As governments start to withdraw from agriculture, however, Cochrane and Runge (1992) predict that governments in a world economy can no longer influence the farm economy as they once did, while Knutson, Penn, and Flinchbaugh (1998) counter that government has lost the will, rather than the ability, to stabilize incomes.

The vagaries of weather produce extreme variability in crop yields, which is a major cause of the fluctuation in farm income. Crop insurance schemes were first introduced in Canada in 1961, with the objective of providing producers some form of yield insurance (see Chapter 8). Annual crop insurance payouts vary due to price and yield variabilities.

The United States has had extreme difficulty coming up with a sustainable crop insurance scheme due to non-participation and fraudulent claims that have increased the insurance risk for those who do participate in crop insurance. The problems have been associated with deception on the part of some farm managers. Also, some superior farm managers do not participate in farm programs, which increase the insurance risk for those who remain. Much of the discussion on insurance focuses on crops. However, there is very little discussion concerning insurance for livestock producers and very little in the way of livestock insurance. This may explain, at least in part, why the livestock sector continues to decline.

Risk Management

An important issue in the policy debate concerns the proper role for government policy … that helps deal with the sizeable production risk existing in agriculture. The management of risk is an important tool for farm producers, but risk-management techniques cannot deal with the secular decline in commodity prices. That trend largely reflects a declining production cost because yields have increased and mechanization has made labour more productive.

Risk-management strategies can help producers deal with the substantial weather-related risk of crop yields but, in such strategies, the appropriate role for government intervention is far from clear. There is the substantial problem of insuring farmers against certain types of production risk. In particular, risk which does not affect all producers in a large geographical area (what economists call *idiosyncratic risk*) is difficult to insure against. The government is no better at solving the moral-hazard and adverse-selection problems than the private markets are. Indeed, the effects of credit schemes, which were designed to assist the rural areas of both the United States and Canada, have shown that governments are less successful when dealing with these problems than the private markets are (Lamb 2000: 26).

1.5 Boom-Bust Cycles: The Importance of Wealth

An important phenomenon that plays havoc with sound government policy design is the boom-bust nature of agriculture. For example, the decade of the 1970s was clearly a boom period, which came to an end in the 1980s. Wealth that was created in the 1970s could not be sustained during the bust period of the late 1980s. During the boom there was excess capitalization of agriculture. In his Waugh Lecture on boom-bust cycles within the agricultural sector, Schmitz (1995a) states that, during a boom period, farm income does not need to track land values. For example, in the 1970s and early 1980s, farm income was actually decreasing while farmers' wealth (of which land is a major source) was increasing. The agricultural sector looked financially sound when, in fact, it was experiencing only a temporary growth in wealth through

increased land values. A farmer's ability to borrow money is related to the banker's perception of the farmer's net worth (Shalit and Schmitz 1984). During the boom of the 1970s and early 1980s, farmers were able to borrow large sums of money because the high value of their land increased their net worth. (Many of the loans could not be supported by cash flow from the actual farm operations.) This excess capitalization phenomenon shows up clearly in Canadian farm financial data. For example, agricultural debt in Saskatchewan was roughly C $2.1 billion in 1977 and C $6.1 billion in 1986. Net farm income, however, remained relatively flat. During the bust period, bankers' estimates of wealth became more conservative, which resulted in decreased lending and the recall of farm loans that created the farm debt crisis of the 1980s (Schmitz 1995a).

The lesson for policymakers is that farm income must be distinguished from *farm wealth*. This distinction manifests itself during the boom periods, in which wealth plays a much greater role in farm financing and restructuring than does farm income.

Boom-Bust Cycles

In his 1995 Waugh lecture entitled 'Boom-Bust Cycles and Ricardian Rent,' Schmitz (1995a: 1110) states that 'critical to understanding the boom-bust phenomenon are the dynamic changes in wealth as distinguished from net realized farm income. During the peak of the U.S.–Canada agricultural boom period in 1981 to 1982, the value of farm real estate in the United States exceeded U.S. $800 billion – more than double the 1974 value – only to drop in 1987 to U.S. $597 billion. The changes in Saskatchewan, Canada, were even more dramatic. Between 1972 and 1982 the value of land and buildings increased by a factor of roughly 7.0, from C $3.6 billion to C $27.1 billion ... Realized net farm income, however, did not grow nearly as rapidly as did asset values.'

Agriculture as the *Titanic*

The movie *Titanic* represents the current state of agriculture very well. Imagine the huge, majestic ocean liner sailing merrily across the North Atlantic, unaware and unwilling to recognize danger. The crew and passengers believed that the *Titanic* was so big, strong, and powerful that nothing could stop it. But an iceberg – a sudden, dramatic, and terrifying phenomenon of nature – took it to the bottom of the sea with several hundred lives lost. Today, the worldwide food-production system resembles the *Titanic* as it sails along.

Politicians and the general public ignore, to their peril, the economic conditions of agriculture. Only during turbulent times – in periods of food shortages or economic crises – does agriculture get broad policy attention. Policy that only reacts to crises is not generally the policy needed to sustain an industry (Quigley 2000).

During periods of farm prosperity, there is generally a lack of interest in farm policy matters. However, when the farm economy collapses, policymakers scurry to come up with a new farm policy. This is clearly evidenced by the formation of the U.S. Commission on Twenty-

First Century Production Agriculture, set up during a period of depressed farm prices and income with a mandate to lay the groundwork for the 2002 U.S. Farm Bill.

1.6 Agribusiness and Contract Farming

Unlike many treatises on agricultural policy, this book emphasizes the interface between agricultural policy and agribusiness. Rent-seeking behaviour by agribusiness helps steer policy in a particular direction. Some interpret the word *agribusiness* narrowly, taking it to mean only very large or conglomerate producers within the agricultural sector. But agribusiness is more than large corporations in basic production agriculture. Davis and Goldberg (1957) define *agribusiness* much more broadly to include the total of all operations involved in the manufacture and distribution of farm supplies; production operations on the farm; the storage, processing, and distribution of farm commodities, and the items made from the farm commodities. Many agribusinesses are large corporate giants that buy and sell agricultural outputs and inputs worldwide.

Grain Companies' Profits Soar

At a time when parts of the world are facing food riots, Big Agriculture is dealing with a different sort of challenge: huge profits.

Grain-processing giant Archer-Daniels-Midland Company recently said its fiscal third-quarter profits jumped 42 per cent, including a sevenfold increase in net income in its unit that stores, transports, and trades grains such as wheat, corn, and soybeans.

Monsanto Company, maker of seeds and herbicides; Deere and Company, which builds tractors, combines, and sprayers; and fertilizer maker Mosaic Company all reported similar windfalls (Kesmodel, Etter, and Patrick 2008: A1).

The influence of agribusiness on policy decision-making is often neglected by policy analysts. The influence of agribusiness is growing. For example, Monsanto's 1966 annual report noted how U.S. farm policy was shifting from surplus control to increased production, a move that might have increased the demand for farm chemicals. Company goals included more production, lower farm product prices, and fewer farmers. These goals were in direct conflict with those of farm policy (Levins 2000: 43). Also, according to Levins (2000), the 1950 John Deere annual report points out how larger but fewer farmers mean more sales of tractors, and how Cargill, Inc. engineered change to the benefit of the John Deere Company by increasing farm input use.

Contract farming is growing rapidly in North America, and is part of the agribusiness complex. Contract farming involves producers signing fixed-price contracts with processors and other upstream corporations. In certain cases (e.g., U.S. poultry), producer control is even more limited because the processor controls the output of the producer. Levins (2000) indicates that U.S. production contracts covered about U.S. $60 billion in agricultural products by 1997, which

is almost one-third of the farm-level crop and livestock sales. In 2002 production contracts exceeded U.S. $70 billion.

Level the Playing Field

One cannot overemphasize that 'as policy economists, we have lagged behind in developing language that would help us formulate realistic solutions in the New Generation of Power. We speak of farm program benefits being *capitalized into land values* without thought that agribusiness may be taking its share, too, or that active farmers own less and less of U.S. farmland. We talk of large farmers doing-in small farmers, with virtually no consideration that powerful agribusiness interests may be doing in both.

'We must begin by recognizing that the 1996 Farm Bill, popularly known as *Freedom to Farm*, is completely wrongheaded. The farm sector was to be freed from troubling public restrictions and allowed to compete on a *level playing field*. The playing field to be leveled was that of trade barriers between farmers in the United States and those in other countries ... Meanwhile, the multinational processors and input suppliers went on about their business of mergers and acquisitions in an all-out effort to become less competitive. If the government's goal is to strengthen the farm sector, it set out to level the wrong playing field. Competition lowers profits while economic concentration has the opposite effect' (Levins 2000: 45).

Old MacDonald's Farm

Levins (2000) observed that "old MacDonald's farm" is being absorbed into what might be called "new MacDonald's farm". In other words, farming has begun to resemble the corporate world. The operator buys the supplies and the equipment from the brand-name company and produces to its uniform specifications.

This sophisticated corporate system for food production is in the process of creating new pockets of poverty across prosperous America – places where people without much income or influence dwell in an environment that is ruined both physically and socially (Greider 2000: 26).

Often, large factory farms and packinghouses are located in isolated rural communities. According to T. Johnson (2000: 16), 'the food factories will operate with the most advanced technologies, yet local public services, especially education, will be minimal. Incomes will be significantly lower, populations stable or declining, the tax base weak and eroding. These communities will rival inner cities as the primary destination of international immigrants ... These immigrants will largely work at close to minimum wages for value-added agricultural processing or other manufacturing firms. The pattern is already visible in rural backwaters and on Indian reservations – sites are chosen by agribusiness on the assumption that very poor people will not object to anything that promises even a little income.'

1.7 Lack of Countervailing Power

One policy issue related to the growing degree of concentration of agribusiness firms that remains important to farmers worldwide is the imbalance of market power. Generally, small independent farmers express concern that they have no market power when they bargain with large agribusiness firms.

David versus Goliath

Farmers lack countervailing power against industries that are highly organized in nature. This frustration was summarized one hundred years ago by Ed Partridge (founder of United Grain Growers) from Sintaluta, Saskatchewan, when he said, 'At present we are but pigmies attacking giants. Giants may compete with giants, pigmies with pigmies, but pigmies with giants – never' (Schwartz 1959: 7).

A growing concern among producers is the increased concentration of input suppliers and processors. There remain only a few manufacturers of large four-wheel-drive tractors and grain harvesters. Also, the processing sector has become highly concentrated. For example, in Canada there are only two meat-packing companies. Farmers have had little success when bargaining with input dealers or with processors (Fowke 1957). If there is only one processor in a region, a producer's options will be limited. The degree to which the producer is captive to a processor will depend on the producer's cost of moving his product to an alternative processor. This varies not only with the distance travelled to any one processor, but also with the expense involved. Producers who have the same costs to move their products to either of two delivery points have some ability to negotiate price. Once the commodity is at a specific processing facility, however, producers have expended a certain amount of cost which, of course, they prefer not to forfeit. This leads to the potential for market power to be exerted on the producer by the processing or marketing firm. Many agricultural regulations and programs have been constructed to address the imbalance of bargaining power between farmers and the companies selling inputs to them, and between farmers and the companies buying their products. For example, the Canadian federal government has a revenue cap set on the movement of Western Canadian grain to mitigate the market power of the railroads. In 1986 the Canadian federal government introduced the Competition Act, which was intended to limit the use of market power by firms. The Competition Act is seen as having little influence when protecting farmers from the market power of input and marketing firms. This leaves farmers with few options other than government regulation.

1.8 Farm Policy, Government Support Levels, and Effective Lobbying

Government support for agriculture varies by commodity and country. Government support for grain farmers in Canada is much less than it is for the supply management sector that includes dairy and poultry. Likewise, U.S. dairy supports are higher than for grains and oilseeds. Government support for grain farmers in the United States is much higher than it is in Canada, while support in the European Union is higher than it is in the United States.

Support levels in the United States for grains and oilseeds are much higher than they are in Canada. In 1999 North Dakota wheat producers received 85 per cent of their net farm income from government transfers; in Saskatchewan, however, transfers made up less than 10 per cent of net farm income (Moss and Schmitz 2000). The reasons for this discrepancy include the following:

(1) Grain farmers in the United States are much better represented in the U.S. Congress than Canadian grain producers are represented in the Parliament of Canada.

(2) The western Canadian grain lobby is divided in its intent, so it is unable to bring political pressure to bear on the federal government.

(3) There are constitutional differences between the United States and Canada. Unlike in the United States, farm policy in Canada involves both federal and provincial jurisdictions. The provinces are roughly 50 per cent responsible for financing farm programs, but some provinces in Canada do not have a broad tax base. This creates financial difficulties for any major agricultural province experiencing a farm crisis.

(4) Politicians are not overly generous with farm payments unless there is a political pay-off. This is clearly visible in western Canada because, at times, the political stripes of the governments of Saskatchewan and Manitoba are different from those of the federal government (Schmitz 2000). Also, policy favours Ontario and Quebec because of the large number of votes.

(5) Canada's lack of population makes farm price supports and export subsidies more expensive to Canadian taxpayers than they are to U.S. taxpayers.

(6) Relative to the United States and the European Union, Canada may be adhering to a much more narrow interpretation of the WTO's Green Box category that defines trade-distorting policies.

1.9 Targeting Farm Subsidies

There is a continuing debate as to whether farm subsidies should be targeted to low-income farmers. A report by Offutt (2000), administrator of the U.S. Department of Agriculture, Economic Research Service Division (USDA/ERS), provides an income profile of U.S. farmers and demonstrates what might happen if policy is targeted to low-income farmers. The net cost of the program does not change significantly over whether targeting occurs, but the distributional effects are very different. However, the report by the U.S. Commission on Twenty-First Century

Production Agriculture (2001) seems to sidestep the issue of whether or not policy should be targeted. Their definition of the *farm problem* is more along the following lines: (1) production of an abundant supply of high-quality agricultural products at reasonable costs; (2) maintenance of a prosperous and productive economic climate for the farmer producers; (3) maintenance of the family-farm organization as a dominant part of the production system; and (4) realization of a high quality of life for all individuals living in rural areas. These goals do not include targeting. In fact, the conclusion of the Commission supports increased subsidies for a broad range of agriculture.

Capping Farm Payments

In 2009 the Obama Administration pushed for coordination within federal agencies to strip direct farm payments from thousands of farmers. The U.S. Department of Agriculture and the Internal Revenue Service teamed up to prevent payments from going to millionaires. The 2008 U.S. Farm Bill ruled out direct payments to those with a $500,000 per year average for three years of farm income and an average of $350,000 per year of adjusted gross income. Beginning with the 2009 crop year, the USDA required farmers and other entities receiving received payments to sign a separate form that grants IRS the authority to provide income information to the USDA for verification purposes (Schuff 2009).

1.10 Rural Communities

Many rural communities flourished in the early 1900s, only to disappear in the late 1900s. The most important reason why this happened is technological advancement. During the early agricultural settlement of western Canada, the horse-and-wagon was the major mode of transportation. Farmers had to haul their grain in horse-drawn wagons to the closest elevator located on a rail line. The maximum distance a farmer could be expected to travel with a grain-loaded wagon was approximately seven miles. Elevators were built about every seven miles along the railway track, which then became the location for a new farm community. As new roads and vehicles became available and farmers could haul their products farther, some of the elevators were removed, which gradually caused the communities that had grown up around these elevators to disappear.

Dying Communities

And every time a light goes out, this country is losing something. It is losing the precious skills of a family-farm system that has given this country [the United States] unbounded wealth. And it is losing free men (Kotz 1976: 41).

Furthermore, with the development of larger tractors, including four-wheel-drive units, farm owner-operators can farm increasingly larger tracts of land more efficiently (farm size has increased dramatically since the early 1900s.) In 1950 it was not uncommon for farmers to plant

a crop with an eight-foot, one-way disk that was pulled by a small tractor. By 2001 crops were planted using sixty-foot air drills pulled by large, four-wheel-drive units. Technological advancement has displaced farm families as fewer people are needed to farm efficiently larger tracts of land.

Politicians often defend agricultural programs on the grounds that they bolster rural communities. However, from an analytical viewpoint, the link between farm programs and rural communities has not been established. In many cases, the available evidence suggests that agricultural programs have been unable to stop the collapse of rural communities. For example, the closure of many country elevators was neither the result of, nor could it have been averted by, agricultural policy; rather, grain elevator companies shut down many of their elevators simply to maximize profit.

The survival of rural farming communities depends on the number of farm families, but this number is decreasing. It is an open question as to whether or not governments should interfere with this outward movement of people. Instead, some argue that assistance packages should be provided to help farmers exit the agricultural sector, rather than to support or prop up dying communities. One of the limitations of this book is that it does not delve into the issue of whether policy could save rural towns, or even if it should. Many economists argue that rural community development requires its own policies and cannot depend on agricultural policy alone.

1.11 Commissioned Reports

Numerous commissions have studied the farm problem. For example, in 1969, the Canadian federal government commissioned a report on agriculture entitled *Canadian Agriculture in the Seventies* (Cambell et al. 1969). The report argues that there are too many resources in agriculture and that adjustment is required. In essence, it claims that there are too many farmers in Canada, and that two-thirds of them need to leave the industry so that the remaining one-third can make a decent income from farming. This report reflects a changing federal-government view of primary agriculture, which has not been greeted with enthusiasm by the agricultural sector.

Despite the Commission's conclusions, successive governments introduced programs to prop up farm income, hoping to slow down the out-migration of people from agriculture. Supply management programs were introduced for dairy, eggs, and poultry. Prior to 1970 Canadian farmers received virtually no direct payments from government (Fulton, Rosaasen, and Schmitz 1989). Beginning in the mid-1980s, government support for farmers increased dramatically.

The U.S. government, too, commissioned numerous studies on the future of agriculture. These studies concluded that too many resources are committed to agricultural production and that there is an urgent need for farm consolidation.

1.12 Trade and Trade Policy

Agricultural trade is an important component income for farmers, processors, and distributors. Trade has increased significantly, especially with the change in the composition of trade. Take, for example, the percentage of fish products sold on the world market compared to 20 years ago.

While we spend a considerable amount of time on the discussion of trade instruments such as tariffs, quotas, and export taxes, the effect of these instruments cannot be analyzed without recognizing the interface of agricultural and trade policy. For example, a price support policy increases production and lowers world prices. This is a benefit to importers because they pay lower prices for food and food products. Even so, this constitutes an export subsidy, and is a result of farm policy.

1.13 Food Policy

Since the early 1900s, the emerging landscape of food policy in the United States has been influenced by changing consumer preferences and demand for certain products. Arguably, the influence of consumer demand upon food production and food policy has increased substantially within the past 20 years. An example of this is the emerging consumer demand for non-GMO labeled goods, such as rice. This structural change occurs at the interface with U.S. trade policy on GMO or non-GMO imports and exports (Starlink Corn and Canola).

Furthermore, as USDA health and nutritional guidelines have evolved, food policy has emerged attempting to mitigate obesity and its health effects. For example, many cities in the United States and the European Union have instituted a tax on sugar sweetened beverages. Much like for GMO and gluten-free products, heightened consumer awareness and demand for lower sugar content in both beverages and food has already prompted unofficial added labeling. It is partly due to this that the U.S. sugar industry has seen a decrease in domestic sugar sales.

A point for consideration is the connection between food policy and food waste, especially in the context of global food security. Some geographical areas suffer from severe undernourishment (starvation), while other areas suffer from overnourishment (obesity). Many programs are successfully addressing malnutrition in areas where consumer lack purchasing power, but changing the behavior of consumers with purchasing power who simply make poor diet decisions is not a simple task. There is currently much debate over what types of policy can best address this behavior. There is also the problem of food products that could feed the malnourished being used to create non-food commodities. One example is corn being converted to ethanol.

1.14 Summary and Conclusions

- Agriculture is a highly complex industry. It includes hobby farms, small farms, large farms, and agribusiness corporations, which makes defining the farm problem extremely difficult.

- Agriculture is highly unstable and producers are exposed to high risk. (One means of reducing risk is contract farming.) Also, boom-bust phenomena are present that create nightmares for policymakers.
- Perhaps it is because of this complexity that producers and agribusiness are able to engage effectively in rent-seeking behaviour for government subsidies. Lobbyists and politicians generally get around the complexity of the farm industry by neglecting to define agriculture. Often, the goals of agricultural policy are simply stated in terms of unstable and low farm incomes.
- Politicians are reluctant to target farm subsidies to those in need.
- The level of U.S. and EU government farm support is high. This is also true in Canada for the supply management sectors but not for the grains and oilseeds sectors. We provide rent-seeking behaviour arguments as to why this is the case.
- Much of the discussion on insurance focuses on crops. However, there is very little discussion concerning insurance for livestock producers. In fact, in North America, there is very little in the way of livestock insurance. This may explain, at least in part, why the livestock sector continues to decline.

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