Bi-weekly Bulletin

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U.S. AGRICULTURE POLICIES: IMPACT ON SOYBEAN PRODUCTION

The production of soybeans in the U.S. has increased to a record high, despite the significant decrease in market prices. Although a number of factors have contributed to the increase in output, the high marketing loan rate for soybeans relative to corn and wheat, combined with other provisions introduced with the *Federal Agricultural Improvement and Reform (FAIR) Act* in 1996, has played a major role. The marketing loan rate has provided artificial support for soybeans during a period of weak market prices which would otherwise have discouraged soybean production. High loan deficiency payments (LDPs) have insulated producers from the impact of low market prices and encouraged increased soybean production which, in turn, has contributed to the pressure on global oilseed prices. This issue of the *Bi-weekly Bulletin* examines the relevant aspects of the U.S. FAIR Act, assesses the impact on U.S. soybean production, and the implications for Canada.

The U.S. FAIR Act was signed in April 1996. The main objective of the Act was to increase the planting and marketing flexibility for producers of wheat, corn, grain sorghum, barley, oats, rice, and upland cotton. Under the previous legislation certain government programs, which applied to wheat and corn, did not apply to soybeans, i.e. the Acreage Reduction Program (ARP) and the target price/deficiency payment program. The absence of these programs for soybeans artificially favoured program crops, especially corn.

The FAIR Act fundamentally changed U.S. agriculture policy through the removal of the ARP, the elimination of target prices and the introduction of, or increased focus on, marketing loan rates, the LDP program and production flexibility contracts. The loan rate for soybeans increased relative to that of wheat and corn. This has played a major role in the expansion of area seeded to soybeans, higher production, and the subsequent decline in soybean prices.

Production Flexibility Contracts (PFC)

Title 1 of the FAIR Act, *The Agriculture Marketing Transitions Act*, replaced the target price/deficiency payment program, which had been in place since the early 1970s, with a new program of decoupled payments which are not based on current production or market prices.

To receive these payments, and be eligible for loans on contract commodities, a producer had to enter into a PFC for 1996-2002. The PFC requires participating producers to comply with conservation, wetland and planting flexibility provisions, as well as keep the land in agricultural use. Land eligible to enter into a PFC includes: (1) land enrolled in the ARP for any of the crop years 1991 through 1995, (2) land considered planted under program rules (certified acreage), or (3) land that had been enrolled in the Conservation Reserve Program that had a crop acreage base associated with it. Producers receive PFC payments for seven years, 1996-2002, based on enrolled contract acreage and are not related to current plantings.

Under the FAIR Act, the ARP, in which producers were required to idle a portion of their cropland, as a condition for receipt of deficiency payments, was terminated. Deficiency payments equalled the difference between the target price and the higher of the loan rate or the market price. Participating producers are now permitted to plant 100% of their contract acreage plus any other cropland acreage on the farm to any crop (with limitations on fruits and vegetables) with no loss in payments as long as the producer does not violate conservation and wetland provisions. Planting flexibility or ability to adjust crop rotations increased significantly. Under the previous legislation, producers had flexibility on only 15% of their base acreage without losing part of their deficiency payments.

The cumulative budget for PFCs is US$36 billion over the 7 period from 1996 to 2002, beginning with the one-time sign up in 1996. PFCs are not tied to current production levels and are therefore decoupled. However, producers are eligible to receive their PFC payments regardless of whether or not a crop is planted. PFC have supported higher production via raising producer incomes and increasing the access to capital to maintain or expand the current level of operation. Producers are more willing to make investments and lenders are more willing to make loans.

Marketing Loans

Under the FAIR Act, the USDA's Farm Service Agency, on behalf of the Commodity Credit Corporation (CCC), administers nonrecourse marketing assistance loans for 17 crops. Marketing loan repayment and LDP provisions apply to each of these commodities except for cotton.

Nonrecourse marketing loans were originally designed to provide producers with cash flow immediately after harvest, eliminating the need to sell the grain to pay bills when prices were at post-harvest lows. These loans allow producers to store the grain after harvest, pledging the

crop as collateral, and market the crop in an orderly manner throughout the crop year. The producer could repay the loan plus interest with the proceeds of the sale.

Marketing assistance loans for each of the 16 commodities are nonrecourse in nature. That is, in lieu of selling the grain and repaying the marketing loan, a producer may deliver the quantity of grain pledged as collateral to the CCC. Producers used to take advantage of this option and default on their grain when prices were near or below the marketing loan rate which resulted in the accumulation of inventory by the CCC. It also led to high costs of storage for the government.

Provisions of the marketing loan, that allow repayment of the marketing loan rate plus accrued interest or the posted county price (local market price) at maturity of the loan, whichever is lower, were retained. Instead of taking out a nonrecourse marketing loan and defaulting on the crop at a later time, the producer may choose to receive a direct LDP when the loan rate exceeds the posted county price (i.e. the marketing loan gain). The loan rate becomes an effective price floor for U.S. producers while the lower posted county price reflects the prevailing world market price.

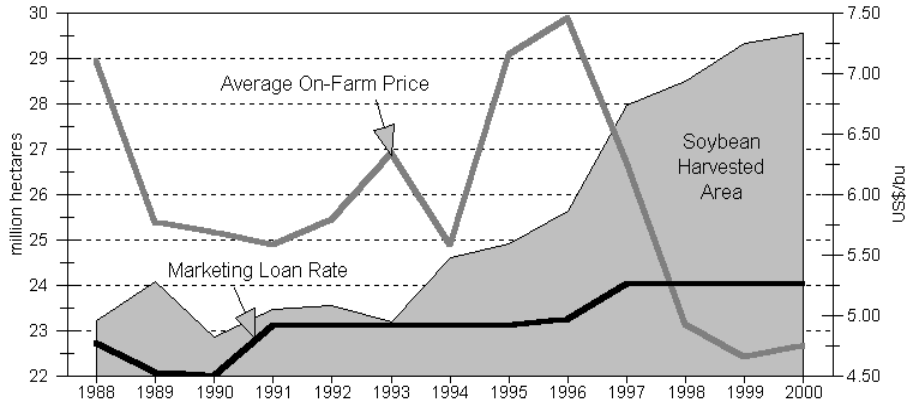
A U.S. producer will obtain a return near the loan rate if he/she collects the LDP and sells the soybeans at the same time. However, U.S. producers can obtain returns above the loan rate by taking out a LDP or obtaining the marketing loan gain when prices are seasonally low, and then selling the crop later in the year when prices have risen.

Loan Rates and LDP

The soybean national loan rate is based upon the 85% formula but the minimum and maximum rates are set at US$4.92 and $5.92/bu. The national marketing loan rate for soybeans in the U.S. was US$5.26/bu in 1999-2000 and 2000-2001.

The LDP is determined by deducting the posted county price from the local marketing loan rate. In 1999-2000, the U.S. paid out over US$2.1 billion in LDP on 2.3 billion bushels of soybeans, which was about 88% of the total production.

U.S. SOYBEANS: HARVESTED AREA VERSUS PRICE



Note: Marketing loan rate minus on-farm price equals the US$/bu support offered to U.S. producers.
The soybean harvested area increased in 1999 and 2000 despite the decline in market prices.
Source: USDA

The LDP averaged US$0.91/bu or 17% of the national loan rate. The majority of LDPs were paid out between October 1999-January 2000. The weekly volume of LDP payouts peaked at 211 million bushels (Mbu) in the third week of October 1999 when the LDP averaged US$0.90/bu.

In 1999-2000, U.S. producers received US$1.49 billion in nonrecourse loans on 287 Mbu of soybeans, which was slightly over 10% of total production. By the end of 1999, 268 Mbu were forfeited to the U.S. government.

Increased Soybean Production in the U.S.

Several factors have resulted in the expansion of seeded area and production of soybeans in the U.S.

First, the **marketing loan rate** exceeded the 1999-2000 average on-farm market price by about 21% for soybeans but only by about 16% for corn. According to USDA research, the area seeded to soybeans changes by 0.265% for every 1% change in price. This implies that U.S. area

SOYBEANS: SUPPLY & DISPOSITION

	1998 -1999	1999 -2000e	2000 -2001f
		.....million tonnes.....	
WORLD *(October-September)*			
Carry-in Stocks	24.8	26.2	23.8
Production	159.8	157.7	167.3
Total Supply	**184.6**	**183.9**	**191.1**
Crush	135.9	137.2	143.3
Other	22.5	22.9	24.4
Total Use	**158.4**	**160.1**	**167.7**
Carry-out Stocks	26.2	23.8	23.4
Trade	38.7	46.3	46.7
UNITED STATES *(September-August)*			
Carry-in Stocks	5.4	9.5	7.8
Production	74.6	72.2	75.6
Imports	0.1	0.1	0.1
Total Supply	**80.1**	**81.8**	**83.5**
Crush	43.3	43.0	43.7
Exports	21.9	26.5	26.5
Other	5.5	4.5	4.6
Total Use	**70.7**	**74.0**	**74.8**
Carry-out Stocks	9.5	7.8	8.7
CANADA *(September-August)*			
Carry-in Stocks	0.2	0.2	0.3
Production	2.7	2.8	2.7
Imports	0.3	0.5	0.5
Total Supply	**3.2**	**3.5**	**3.5**
Crush	1.6	1.7	1.7
Exports	0.9	1.0	1.0
Other	0.5	0.6	0.5
Total Use	**2.9**	**3.2**	**3.3**
Carry-out Stocks	0.2	0.3	0.2

e: estimate, USDA and AAFC December 2000
f: forecast, USDA and AAFC December 2000
Source: USDA, Statistics Canada, AAFC

seeded to soybeans in 1999-2000 was about 5.5% higher than warranted by market prices. Historically, U.S. producers have switched area out of corn into soybeans when the soybean/corn price ratio exceeded 2.5. The high target price of corn, relative to the soybean loan rate discouraged soybean plantings.

This changed when the target price for corn was eliminated. Since the ratio of the loan rate on soybeans to corn was 2.78 in 1999-2000, there was a strong incentive to switch to soybeans. As a result, in 1999-2000, the area seeded to soybeans in the U.S. exceeded corn for the first time in history

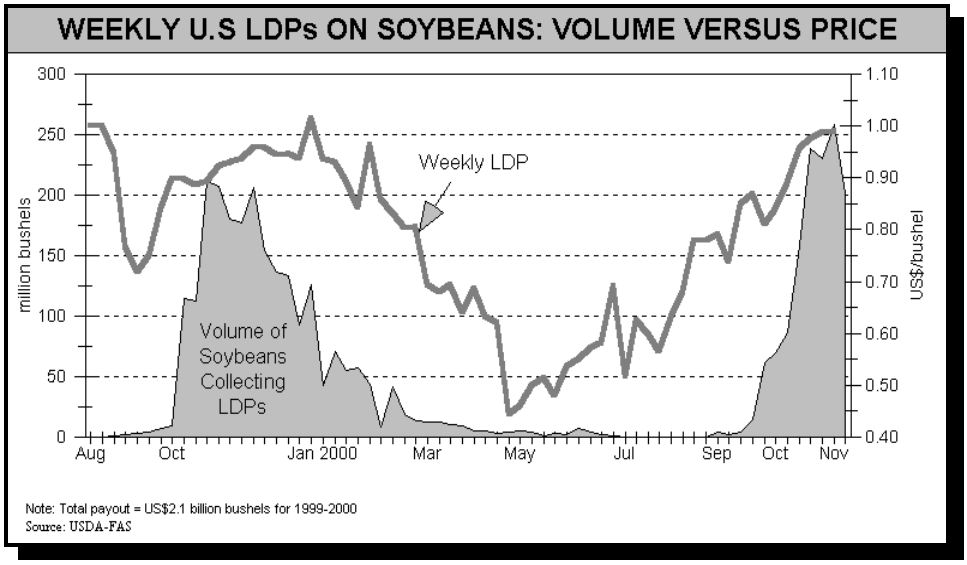
Second, under FAIR, producers gained additional **production flexibility** in adjusting their crop rotations and were no longer required to set aside productive land to receive government program payments. Given the relative marketing loan rates, producers switched to soybeans at the expense of other crops.

Third, higher yielding **new varieties** of soybeans allowed producers to profitably grow soybeans at lower prices and lower heat unit varieties permitted the expansion of soybean plantings along the northern and western fringes of the U.S. soybean belt. Moreover, expanded crop insurance coverage permitted increased planting in riskier regions.

Fourth, the **marketing flexibility** introduced by the FAIR Act allowed U.S. producers to collect the highest level of LDP when prices were seasonally low, and then sell their soybeans when market prices increased. By using this strategy, U.S. farmers could receive a total return for their soybeans that was above the loan rate. There is some risk associated with this strategy. If prices fell, the sum of the new market price and the LDP would be less than the loan rate.

Impact of LDP on Canada

Under provisions of the 1990 *Food, Agriculture, Conservation and Trade (FACT) Act*, the U.S. marketing loan provided a price floor for soybeans by allowing the soybeans to be placed into government owned storage and removed from the market. This reduced marketable supplies of soybeans and acted as a price floor for oilseeds worldwide. Under the 1996 FAIR Act, the price floor was removed which allowed world prices to decrease below the loan rate.



Market prices are also pressured by heavy U.S. producer selling after harvest as producers simultaneously sell their soybeans and collect the LDP. Prices then rebound after the majority of producers market their soybeans. However, the U.S. producers participating in the program are insulated from the price volatility.

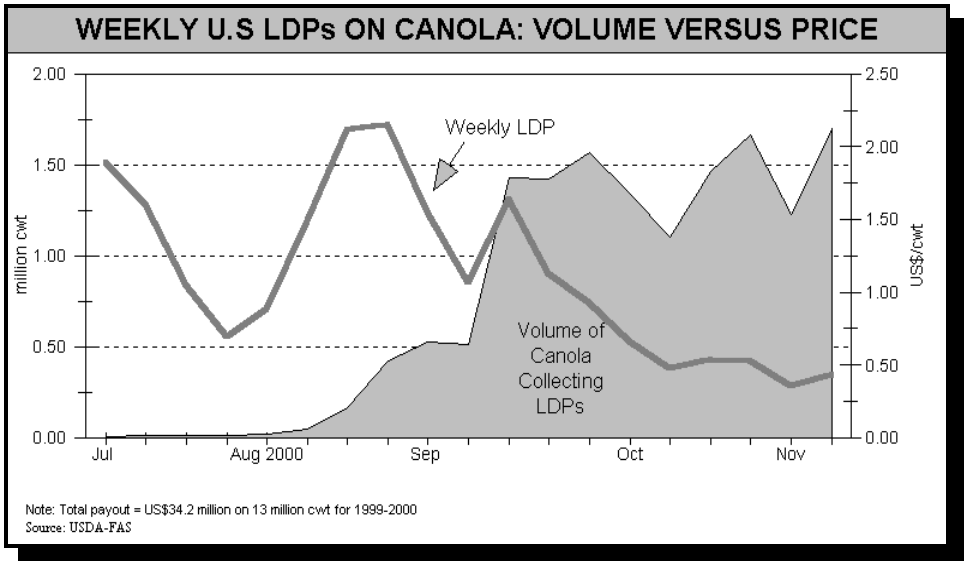
In general, Canadian production is small relative to total world oilseed production, and is strongly influenced by U.S. soybean prices. Increased soybean production in the U.S. has pressured the prices of oilseeds worldwide, reducing the market price for Canadian soybean growers.

In 1999, the U.S. Producer Subsidy Equivalent (PSE) for soybeans is estimated at CAN$85 tonne (/t) (US$58/t) or 25% of the value of soybeans. By comparison, the PSE for Canadian soybeans is estimated at $32/t or 12% of the value of soybeans.

On the other hand, Canadian consumers of soybeans and soybean products have benefitted from lower prices. For example, the Canadian livestock sector, has benefitted from the lower price of soymeal. Similarly, users of soyoil and other vegetable oils, such as the food processing sector in Canada, have benefitted from lower prices.

OUTLOOK

Partly as the result of the revenue floor provided by the marketing loan rates U.S., soybean production is projected to



increase to a record 2.78 billion bushels {75.6 million tonnes (Mt)} for 2000-2001, due to an increase in seeded area combined with higher yields. Meanwhile, supplies of soybeans are forecast to increase by 2% as the rise in output offsets the decline in carry-in stocks. Carry-out stocks are forecast to increase significantly in spite of increased domestic crush and exports. The average U.S. farm price is expected to increase slightly to US$4.80/bu from US$4.65/bu due to a slight increase in soymeal prices.

For 2000-2001, to December 1, the LDP has averaged US$0.95/bu on about 1,638 Mbu of soybeans or 60% of the crop. If the LDP is paid out on 90% of the crop at an average rate of US$0.85/bu then total payouts for soybeans in the U.S. would amount to US$2.2 billion, slightly higher than 1999-2000.

In addition, based on the 1999-2000 trends, about 10% of the 2000-2001 soybean crop, (or about 290 Mbu), is expected to collect nonrecourse marketing loans of about US$1.5 billion. Based on the projected market price of US$4.80/bu, the U.S. government is expected to pay out almost US$150 million on soybeans forfeited to the government. Most forfeitures are paid to producers who have hit the limit of US$150,000 per producer on LDPs.

Medium-Term Outlook

Over the medium-term, U.S. soybean production is expected to remain high due to the favourable marketing loan rate for soybeans, relative to corn and wheat. Soybean production will also be supported by the flexibility provisions of U.S. agricultural policy, and by the release of new lower heat unit and drought tolerant varieties. Consequently, assuming no change in U.S. agricultural policy, U.S. payouts of LDP and nonrecourse loans are expected to remain high.

Under the FAIR Act, marketing loans and LDP will continue until at least 2002. What follows depends on any changes to the Farm Bill in 2001 and the next Congress' farm policy choices. Those choices are likely to be influenced by the World Trade Organization (WTO) negotiations. If LDP and marketing loans continue unchanged, then U.S. producers would be expected to continue to receive LDP and marketing loan benefits for the cereal and oilseed crops until world prices improved significantly.

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Loan Rates are established yearly at the national level and are based on a combination of statutory formulas and limits and, to some extent, Secretarial discretion. With the exception of rice, national loan rates for each marketing assistance loan commodity are adjusted to the local level (county or warehouse) to reflect spatial differences in markets, transportation costs, and other relevant factors. Under the FAIR Act, loan rates for most crops continue to be based on 85% of the preceding Olympic 5-year averages of farm prices, i.e. the high and low-price years are excluded. This formula establishes a minimum level for most loan rates. The Secretary of Agriculture has the discretion to set a higher rate than warranted by the formula, but must not exceed a legislative maximum for wheat, corn, upland cotton, soybeans, and minor oilseeds.

Regarding **loan maturity**, the legislation requires that cereal and oilseed loans mature on the last day of the ninth month following the month in which the loan is made, for example a loan made in October matures in July. Note that a loan is outstanding if a producer has secured the loan from CCC, but has not settled the loan, either through repayment or delivery of the collateral to CCC.

The **Loan Deficiency Payment** provisions are active when the alternative repayment rate at a given location is less than the base loan rate at the same location, i.e., when the payment rate is greater than zero. When the provisions are active, an eligible producer may choose to receive a LDP in lieu of securing a loan if the quantity of a commodity is eligible for a nonrecourse loan. Premiums and discounts are not considered when determining the LDP rate. LDP provisions are in effect for a given loan-eligible quantity of a commodity until the final date for loan availability for that commodity.

Total payment limitations on marketing loan gains and LDP payouts of US$75,000 has been increased to US$150,000 in the joint Senate-Congress 2001 USDA Appropriations Bill submitted to the President for approval. This follows the temporary expansion of the cap in 1999-2000 to allow large producers to collect the full program benefits.