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# AgOutlook



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Department of Agricultural and Applied Economics  
**AGRICULTURAL EXTENSION SERVICE**  
**UNIVERSITY OF MINNESOTA**

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## Preface

EACH AUGUST for the past 25 years, extension specialists in the Department of Agricultural and Applied Economics at the University of Minnesota have developed situation and outlook statements that summarize the major national and international factors expected to affect supplies, demand, prices and agricultural income in the coming year. These analyses have been prepared for each major crop and livestock commodity. The following report reflects the department's best judgment regarding the outlook for the coming year.

Since Minnesota agriculture operates in a world economy, supply and demand conditions likely will change in some currently unforeseen ways in the coming 12 months. However, it is hoped the information presented in this publication will serve as a base reference point from which farmers and agriculturally-related industries can adjust their price outlook expectations as conditions change.

The U of M's Agricultural Extension Service and Department of Agricultural and Applied Economics express appreciation to THE FARMER for its cooperation in publishing this year's annual Agricultural Outlook report, thus making the report available to a much larger audience than has been reached in previous years.

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# Economic policies and agricultural income

by G. Edward Schuh and Paul R. Hasbargen

THE WORLD is the market for Minnesota's agricultural products. Therefore, economic forces that influence agricultural trade, inflation and dollar exchange rates also influence agricultural prices and incomes. This article briefly discusses some of these "external" factors, domestic agricultural policy, and the current farm income situation and outlook.

### Economic policy issues affecting agriculture

**Inflation.** Much has been written in recent months about the effects of farm programs and commodity prices in contributing to inflation. An equally important question, of course, is the effect of inflation on U.S. agriculture. The rise in prices of inputs farmers have to purchase is one example of such an impact. But inflation can have a more sizable effect in its impact on the value of the dollar in international money markets. Depending on how

policymakers respond to the increasingly serious problem of inflation, it can be good or bad for agriculture.

Surprisingly, what is good for the dollar is not necessarily good for agriculture. With flexible exchange rates, what happens to the value of the dollar will depend importantly on how our inflation rates compare to those of other countries. To the extent that changes in the value of the dollar reflected only these differences in the rate of inflation, changes in the exchange rate would have little effect on the economy.

However, if inflation is viewed by others as a loss of control of the economy by U.S. policymakers, other countries may want to shift their reserves out of dollars into other currencies. This would cause the dollar to fall by more than the rate of inflation and, in the process, provide a stimulus to our exports.

Similarly, tight money policies to

bring inflation under control can cause other countries to shift their reserves into dollars. A rise in the value of the dollar would make our agricultural exports less competitive abroad and cause a slackening in foreign demand.

What can we expect for the year ahead? As this outlook publication goes to press, the monetary aggregates are out of control, expanding at rates much greater than the targets set by the Federal Reserve. However, the money markets have responded favorably to the change in leadership at the Federal Reserve, indicating that they expect tighter monetary policy and less inflation in the future.

Another effect of inflation—and the expectation of continued inflation—is to drive land prices up even faster than the general inflation rate. Inflation expectations are bid into land prices as farmers and others try to protect their wealth by investing in real property. While this increases the

wealth of those who already own land, it decreases the annual rate of return in land relative to current interest costs and, therefore, it increases the cash flow crunch on current land purchases. This has been making it increasingly difficult for young farmers to buy a farm.

**Multilateral trade negotiations.** The Tokyo Round of trade negotiations has been completed and the implementing legislation passed by Congress. Two things stand out from this round of discussions. First, the very fact that they were brought to a close in the face of such strong protectionist views here and around the world was a major accomplishment. Second, for the first time in the post-World War II period, there were some good things in it for agriculture.

The significance of the first item is that it probably has stopped, at least for the time being, our slide into protectionism. Direct benefits to agriculture will be relatively small in the beginning, but it is always difficult to assess what might be the final impact of particular concessions.

An especially important result of this round was the agreement on the improved rules of the game. Some semblance of ground rules has finally been established for when export subsidies can be used, when countervailing duties can be used, and when other forms of trade intervention may be used.

**Agricultural policy.** The current outlook is that commodity programs for 1980 will involve no set-aside. If that is the case, look for the Administration to go to Congress for special legislation establishing new target prices.

If farm prices should fall next year because of excess production and/or a weakening in foreign demand, the Administration most likely would respond by increasing farmer-held reserves, perhaps with some increase in storage payments. Most observers believe the reserve program worked quite well in picking prices up in 1978, as well as leveling off their upward trend this year.

#### Farm income outlook

Current expectations are that 1979 net farm income could be close to \$30 billion—\$3 billion below the record of 1973, when the dollar was worth more. Off-farm earnings of farm

people also will be up, surpassing the 1978 record of \$34 billion. Aggregate earning figures, of course, can't be indicative of the financial well-being of every individual farm operator. Farm family incomes vary with type of farm, farm size, management level, debt position, local weather and off-farm earnings.

**Type of farm.** A year ago, we expected "an excellent income outlook for dairy, beef and hog producers; a good outlook for poultry and soybean producers and a more moderate one for corn and small grain producers."

These expectations have been fulfilled. Farmers specializing in dairy and beef are enjoying record net incomes. Hog producers and cattle feeders also enjoyed record profits during most of the past 12 months, but they will be realizing losses on some animals sold in late 1979. Incomes have been higher than expected for both poultry and soybean producers because of stronger demands and prices for these products, despite their relative abundance. Feed grain and wheat producers also enjoyed somewhat higher prices than expected a year ago because of the jump in export demand this past spring.

The commodity outlook sections, which follow, suggest that, in the coming year, dairymen and beefmen can expect another excellent income year; wheat and feed grain producers face good price and income prospects, and hog and poultry producers face reduced earnings as increased supplies depress these commodity prices below product costs.

**Farm size.** Secretary of Agriculture Bob Bergland has called for a "national dialogue" on farm policy—to reconsider some of the issues related to the fact that larger farms have been

making excellent farm earnings, whereas some farmers are saying they can't make ends meet. Table 1 shows the average earnings of farmers, by categories, according to their volume of farm sales for 1977 and some rough estimates for 1979.

Some issues about the existing structure of agriculture the Secretary wants discussed are: 1) To what extent have public policies, such as agriculture price supports and tax laws, encouraged the growth of the "large commercial farm" category, and 2) Should some policies be changed to discourage further farm size growth and try to keep more low-resource and part-time farmers in agriculture.

**Management and equity level.** Farm management records consistently show a wide variation in earnings among farms of the same type and size that must be attributed to the management ability of the operators. Management records also indicate that "more credit" is not necessarily the answer for farmers who have low business volume and low management ability.

Rather, 1978 *Agrifax Statistics* (published by St. Paul Farm Credit District, April 1979) show that three-fourths of the 22 dairy farmers who spent more than 25% of their production on interest payments failed to cover all costs, compared with only 3% of the 914 dairy farmer cooperators who spent less than 11% of their gross production on interest.

#### Summary

The income outlook looks very good for well-managed, full-time family farms in 1980. However, low-volume, high-debt-load operations likely will find that costs again will increase as fast as or faster than gross incomes.

**Table 1. Average U.S. farm income by farm size for 1977, with projections for 1979**

	Large commercial farmers <sup>1</sup>	Full-time family farmers <sup>2</sup>	Low-resource family farmers <sup>3</sup>	Part-time and hobby farmers <sup>4</sup>
- 1977 -				
Number of units	55,000	445,000	321,000	1,588,000
Percent of farms	2.3%	18.5%	13.3%	65.9%
Percent of sales	35.7%	42.8%	11.1%	10.4%
Avg. sale per farm	\$642,855	\$93,046	\$34,545	\$6,569
Avg. net farm income	\$ 47,946	\$21,995	\$ 9,993	\$2,657
- 1979 -				
Number of units	70,000	560,000	300,000	1,400,000
Avg. net farm income	\$ 90,000	\$29,000	\$12,000	\$ 3,000
Avg. non-farm income	\$ 12,000	\$ 8,000	\$ 9,000	\$15,000
Total family earnings	\$102,000	\$37,000	\$21,000	\$18,000

<sup>1</sup> Farms with over \$200,000 in farm sales

<sup>2</sup> Farms with \$40,000 up to \$200,000 in farm sales

<sup>3</sup> Farms with \$20,000 up to \$40,000 in farm sales

<sup>4</sup> Farms with \$1,000 up to \$20,000 in farm sales

# Feed grains

by Fred Benson and Willis Anthony

WORLD feed-grain production is projected to be down 3.6% from last year, while consumption is expected to remain relatively the same as last year. Meanwhile, U.S. production is expected to be down slightly, while consumption is expected to be up slightly. Domestic feeding is the central question affecting level of use in the U.S., because animal units likely will increase but feeding rates may decline.

On the worldwide situation, the amount of world export activity can have a large impact on feed-grain price. The USSR feed-grain crop is 20 million metric tons below last year. Their export program will be a function of their eagerness to maintain their livestock feeding program, and it can affect prices positively if they decide to increase their imports of feed grains.

## Corn

The corn market showed little inclination to change direction during the first half of the 1978-79 marketing year. The July corn futures contract traded within a dime on either side of \$2.50 until late April. Farm level prices followed suit, except for an upsurge as basis narrowed immediately after harvest. By early June, the July option still was trading under \$2.70. Then a rapid price rise occurred, triggered by rumors and news of a short grain crop in the USSR, which pushed corn prices to more than \$3.20 the first week of July. More factual information on the USSR crop, plus excellent growing conditions in the U.S., have moved prices downward.

Cash prices varied more than usual through the Cornbelt (Figure 1). Minneapolis cash corn was less than \$2.10 until mid-March. Opening of the waterways brought basis improvement, and it rose to the \$2.90 level in early July.

There are a couple of reasons for these price variations. Transportation costs have been rising; fuel costs, demand for transportation, railway problems and last winter's weather all contributed. Consequently, corn farthest from ports has been at a disadvantage.

An associated factor has been the large amount of corn in storage in the

**Table 2. U. S. supply and demand of feed grains, corn, oats and barley for the 1978-79 marketing year and projections for 1979-80**

	Feed grains		Corn	Oats		Barley		
	million tons	million tons		million bushels	million bushels	million bushels	million bushels	
	1978-1979	1979-1980	1978-1979	1979-1980	1978-1979	1979-1980	1978-1979	1979-1980
Beginning stocks	41.2	45.3	1,104	1,237	311	289	172	228
Production	217.3	215.8	7,082	7,109	601	531	447	356
Imports	.3	.3	1	1	1	1	10	10
Total supply	258.8	261.4	8,187	8,347	913	821	629	594
Feed	132.7	135.2	4,200	4,300	528	530	205	205
Food, seed, etc.	19.7	20.2	575	590	83	90	170	170
Exports	61.1	71.1	2,100	2,500	13	10	26	50
Total demand	213.5	226.5	6,875	7,390	624	630	401	425
Ending stocks	45.3	34.9	1,312	957	289	191	228	169

northern and western Cornbelt. On June 1, Minnesota, Iowa and Nebraska were storing 43% of the corn inventory. This large quantity also was competing for handling facilities with a large supply of upper Great Plains wheat.

**Supply.** Corn supply for 1978-79 was about 8.2 billion bushels, consisting of a 7.1 billion-bushel crop and 1.1 billion bushels of carry-in stocks (Table 2). The large supply and relatively low prices helped stimulate use. Livestock feeding was up about 13% and exports up 8%. Stocks on hand going into the 1979-80 marketing year now are expected to be just over 1.2 billion bushels. Of the total stocks, 643 million bushels were in the long-term reserve on Aug. 1.

As of Aug. 1, the USDA 1979 corn crop projection was 7.1 billion bushels. After a late start, Cornbelt growing conditions have been spotty, with excellent conditions in most areas but drouth in other areas. It now appears that the frost date and harvest conditions will be the decisive factors for the crop. The latest Minnesota Crop and Livestock Reporting Service forecasts project only 50% of the corn crop to be mature at the 50% probability of frost date.

The 1979 U.S. corn crop, according to the August estimate, will put the total corn supply 2% above the 1978-79 supply. Due to lower acreage of other feed grains (oats, barley and grain sorghum are down 10-15%), the total U.S. feed-grain crop will be down slightly. The August forecast was at 216 million tons, compared to the 1978 feed-grain supply of 218 million tons.

Looking at the world situation, the feed-grain crop is down from 750 million metric tons in 1978 to 723 million metric tons estimated for 1979-80. The biggest reduction occurs in the USSR, where the 1978 feed-grain crop was 105 million tons and is estimated at 85 million tons for 1979 (see Table 3).

**Demand.** Although the European Community and Japan remain the largest export destination areas, the USSR again has emerged as a very large potential buyer (Table 3). Current estimates put her crop 20-25% below last year. So the choice being faced by the USSR in 1979-80 is either larger grain imports or livestock liquidation.

In the 1978-79 marketing year, exports are accounting for about 34% of total corn use. Although less important than domestic feeding levels, exports do capture the market's eye from time to time. Speculation about very heavy export demand was associated with the strong market run-up in June.

In particular, popular interest in the lower USSR crop, growing world populations, increasing livestock numbers, declining dollar values in exchange, large foreign dollar holdings, the lateness of the U.S. crop and relatively low U.S. corn prices all contributed to the interest. But actual export commitment rates declined in June. Importers backed off in the face of higher price levels in late June.

Current 1979-80 world feed-grain production estimates by the USDA are at 723.2 million metric tons (Table 3). This is down 2.4% from 1978-79. USDA forecasts world grain imports to be up 11% from 1978-79, chiefly

**Table 3. Coarse grain production (supply) and consumption (demand) for the world and selected countries in million metric tons**

Year	Production							
	World	U.S.	Canada	USSR	W. Europe	E. Europe	China	
1979	723.2	216.4	18.3	85.0	91.3	59.2	83.0	
1978	750.5	218.0	20.2	105.3	94.1	60.0	71.0	
1977	693.9	202.3	22.4	92.6	87.4	59.4	68.4	
1976	702.1	193.9	21.1	115.0	73.1	59.5	68.4	
1975	631.0	184.1	20.0	65.7	83.5	59.9	80.9	
1974	619.8	150.5	17.4	99.7	87.1	56.9	78.6	
1973	660.0	186.6	20.4	101.0	86.4	55.8	75.3	

Year	Consumption							
	World	U.S.	Canada	USSR	W. Europe	E. Europe	China	
1979	742.5	155.9	N. A.	108.0	N. A.	N. A.	85.5	
1978	741.3	152.9	17.2	113.0	108.5	67.0	83.7	
1977	687.1	137.2	16.7	108.0	106.9	66.3	68.4	
1976	681.7	131.2	16.8	115.7	104.9	65.4	68.3	
1975	636.1	135.2	16.8	83.3	106.7	63.5	80.9	
1974	625.8	121.6	16.2	101.4	107.0	62.3	79.0	
1973	661.8	156.0	18.7	104.1	107.2	56.8	77.3	

because of increased imports by the USSR and Eastern Europe.

With projected lower grain production in Canada, Australia and Argentina, USDA is estimating 2.5 billion bushels of U.S. corn exports for 1979-80 (Table 2). Current USDA estimates put ending world feed-grain stocks at less than 15% of consumption, which would be the lowest level in recent years.

For 1979-80, the total U.S. feed grain supply is estimated at 216.4 million tons. Exports are forecast at 71.1 million tons. This would leave a domestic supply of 190.3 million tons—down slightly from last year.

Livestock feeding in the current marketing year is accounting for more than 60% of corn use. Current projections are for domestic feed consumption of about 4.3 billion bushels in 1979-80, compared to 4.2 billion in 1978-79. A moderate decline in numbers of cattle on feed will be more than offset by larger hog and poultry numbers. Consequently, this year's 80.1 million grain-consuming animal units may increase to the 81-82 million unit level.

With reduced supplies of the other feed grains and higher wheat prices, reduced corn feeding rates may appear questionable. However, last winter's rugged feeding environment and this year's incentives for heavy livestock weights may not be factors in next year's feeding program.

During past years, the available supply of feed grain per grain-consuming animal unit has been a useful guide to corn prices. This year, the feed grain supply per animal unit points to an October-June Minneapolis cash price average of about \$2.55, with a good chance of an occasional price run-up due to export interests and crop scares.

There is a great possibility that the actual corn crop will be less than the August estimate, so expect a 2.5¢/bu price increase for each 100 million-bushel reduction in crop size.

Food and industrial uses of corn (including gasohol) have grown in recent years, to about 8% of total use. This use does not appear to be materially affected by supply or price—at least within the range anticipated for 1979-80.

**Supply/demand (use) balance.** At

the end of the current year, carryover stocks will total 1.237 billion bushels. Supply for 1979-80 now appears to be about 8.3 billion bushels. Corn uses discussed above total to about 7.4 billion bushels. Decisions of livestock feeders could easily change domestic use 200 million bushels either way.

Hence, ending stocks estimates of 700 million to 1.2 billion bushels likely will bracket the range. Ending stocks of 900 million to 1 billion bushels appear to be most likely. This would reduce the carryover on hand going into the year and maybe move corn out of the government reserve. This gives us a somewhat bullish price outlook.

**Oats**

The 1979-80 projection for oats production is down about 12% from 1978-79. Total supply, production plus carryover, will be down about 10% from last year. Total use of the oats crop is expected to be the same to slightly more than last year, which indicates a reduction in 1979-80 carry-

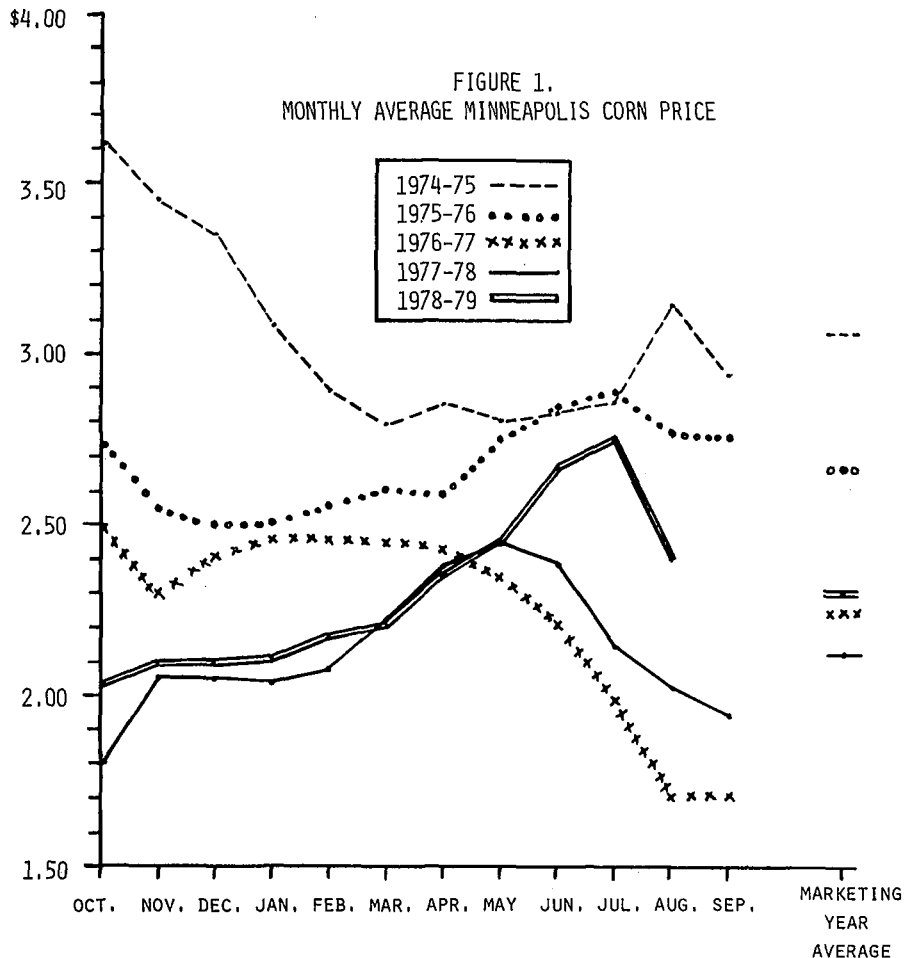


FIGURE 1. MONTHLY AVERAGE MINNEAPOLIS CORN PRICE

over stocks as compared to last year.

With this year's supply/use outlook, we expect the price to average about 60% of the corn price, an average of \$1.50/bu for the marketing year.

### Barley

Total U.S. barley is down about 20% in 1979, but significantly large carryover provides a total supply of only 5% less than last year. Use of barley is expected to remain the same as last year, with the exception of exports increasing by 24 million bushels.

Feed-quality barley prices in the Red River Valley should average around \$2/bu.

### Feed-grain factors to consider

Our advice is to follow a scaling-up policy of pricing by waiting for price improvement later in the year.

The weather still is an important factor in 1979-80 grain production and prices. An early frost, combined with late corn plantings in many areas of the Cornbelt, could significantly reduce the 1979 corn crop.

Watch for the amount of grain being fed to livestock and poultry. If expansion continues and/or livestock prices strengthen, we can expect to see increased feed consumption.

Export demand may be strong, and conversation about exports may be associated with strong market interests, resulting in price run-ups such as the one occurring last June. The lower USSR crop, the declining dollar value on the foreign exchange market and low U.S. corn prices all will contribute to interest in the export market.

# Soybeans

by Willis Anthony and Fred Benson

### 1978-79 review

FOLLOWING the record 1978 soybean crop, an increase in year-end carryover in 1979 was anticipated. As a result, Minnesota terminal market prices fluctuated in the \$6.20-\$6.50 range from harvest through January (Figure 2).

By midwinter, there was concern over a drought-reduced Brazilian crop. Prices in early February reached \$7 and traded at that level until June. By then, high bean disappearance—for both domestic and export use—was confirmed. This strong demand, coupled with conjecture about substantial sales to China and Russia, caused prices to rise sharply to more than \$8 by the third week of June. Five days after peaking, prices dropped \$1.25 and have steered a "nervous" course in recent weeks.

### 1979-80 supply

During the planting season, soybean prices compared favorably with alternative crops. Weather-delayed crop planting in both corn and cotton areas favored increased soybean planting. In August, the U.S. yield was forecast at 30.3 bu/a. But, late planting and slow early growth mean that frost dates and fall weather are critical to the final size of the crop. Assuming normal fall weather, production is forecast at 2.129 billion bushels, up 15.5% from 1978 (see Table 4). Carryover is expected to be about 155 million bushels, so total 1979-80 supply now is expected to be about 2¼ billion bushels, or about double the soybean supply of a decade ago.

1980 Ag Outlook/f

Table 4. Soybean supply and use by marketing year

	1977-78	1978-79	Projected 1979-80
	- million bushels -		
Beginning stocks	103	161	155
Production	1,759	1,843	2,129
Total supply	1,862	2,004	2,284
Domestic crush	923	1,020	1,080
Exports	701	750	825
Seed, feed, etc.	77	79	89
Total use	1,701	1,849	1,994
Ending stocks	161	155	290

Table 5. Production and consumption of protein meals for the world and selected countries, in million metric tons

	Production				
	World	U.S.	Brazil	USSR	China
1979	81.9	33.8	10.2	4.6	5.8
1978	76.7	38.0	7.8	4.6	5.6
1977	66.4	28.5	9.5	4.6	5.5
1976	72.8	33.6	8.5	4.4	5.8
1975	64.3	27.1	7.8	4.8	5.0
	Consumption				
1979	81.6	17.0	1.8	6.0	5.8
1978	75.5	15.0	1.4	5.7	5.7
1977	69.6	14.1	1.8	5.7	5.7
1976	71.5	14.9	1.4	5.9	6.3
1975	64.1	12.8	2.2	5.2	5.3

### 1979-80 projected use

Soybean use has grown steadily in the past several years at an annual average rate of about 6% (see Table 4). A 6% growth can be expected again in 1979-80, since livestock and poultry numbers will be up about that much.

Domestic soybean oil use has been growing about 4% per year in recent years, with sharp year-to-year variations depending on soybean oil supplies and prices relative to other fats and oils. Soybean oil inventories are up from last year, and the rate of projected crushing indicates that soybean oil supplies will continue to exceed expected use. In addition, domestic supplies of lard, cottonseed oil, corn oil and sunflower oil also will increase.

The export market is the most volatile part of the soybean market, because U.S. soybeans account for a large portion of the world's protein meal and vegetable oil production (see Table 5). Exports of soybeans are expected to increase about 10% in 1979-80. Exports of soybean oil and meal also will be up.

Soybean meal now accounts for 60-65% of the total world protein meal, and total world protein meal production is projected to rise about 10% in 1979-80—with more than half of that increase coming from U.S. soybean increases. One-fourth of the increase would come from Brazilian and Argentinean soybeans, if their crops return to normal. Production of oilseeds in Canada, the USSR and other countries also is likely to be up. Demand

for U.S. soybeans for meal will increase but, if the southern hemisphere crops are normal, the strongest demand might be early in the year.

Soybean oil accounts for 32% of world vegetable oils. World buyers have a greater range of alternatives in edible vegetable oils than in protein meal. World vegetable oil production is expected to be up 9-10%. Although soybeans will supply a large part of the increase, sunflowerseed, coconut and palm oil production also will increase substantially.

Total U.S. 1979-80 soybean use will expand almost as much as supply increases, with increased carryover likely at year's end. Ending stocks are expected to be about 14.5% of annual use—a higher percentage than the last couple years but below the levels of both 1974-75 and 1975-76.

### Soybean prices

If supply and use projections materialize as expected, prices for both soybean oil and soybean meal likely will be lower than last year.

Based on August supply/use forecasts, terminal soybean market prices are expected to average about \$5.85 during the first nine months of the 1979-80 marketing year (Table 6). This would imply meal prices of about \$160/ton and oil prices of about 23¢/lb—a very good buy considering U.S. inflation and dollar devaluation.

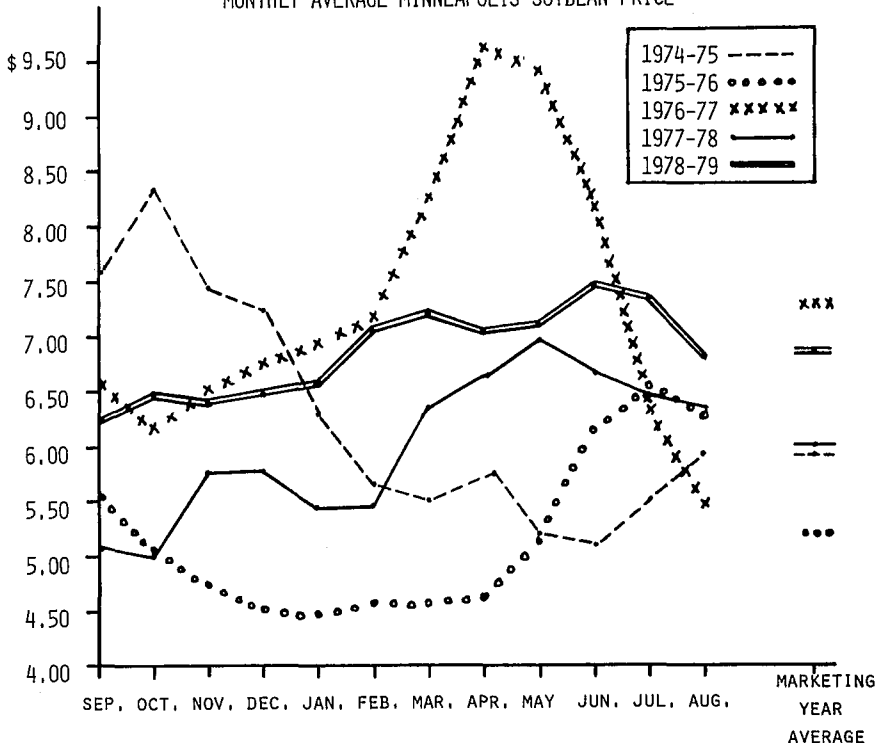
If the actual crop does not reach August forecasts, which is highly likely, or hog and poultry feeding increases, or the Brazilian crop is less than normal, the price will be higher. For each 100 million-bushel reduction in crop size or increase in use, we would expect a 60-65¢/bu increase in price. The odds seem to favor some combination of lower yields and higher use that will move price expectations up somewhat in the coming months.

One of the major difficulties in soybean price forecasting is associated with dollar values and currency exchange rates. A large part of the market for U.S. soybeans is in the strong-currency industrial countries. Last year, the dollar fell in value relative to European and Japanese currencies. As pointed out earlier in this publication, the weaker dollar gives rise to higher bid prices from importers. The dollar may gain in value in the coming year, which would adversely affect U.S. soybean prices.

**Table 6. Soybean prices compared with market value of oil and meal**

	Aug. 24, 1978	Aug. 9, 1979	Projected 1979-80
Soybean oil price/pound	\$.274	\$.281	\$.23
Oil yield/bushel	11.10 lbs	11.24 lbs	11.10 lbs
Oil value/bushel	\$3.02	\$3.16	\$2.55
Soybean meal price/ton	\$167.50	\$188.00	\$160.00
Meal yield/bushel	47.80 lbs	47.75 lbs	47.80 lbs
Meal value/bushel	\$4.00	\$4.49	\$3.82
Value of oil & meal/bushel	\$7.02	\$7.65	\$6.37
Crushing margin/bushel	\$.40	\$.50	\$.50
Soybean price/bushel	\$6.62	\$7.15	\$5.87

**FIGURE 2. MONTHLY AVERAGE MINNEAPOLIS SOYBEAN PRICE**



## Sunflowers

U.S. FARMERS planted about 5.3 million acres of sunflowers in 1979, up from 2.84 million last year. Most of the production is in the Upper Midwest. In August, the crop was expected to be 70-90% greater than last year's crop.

Domestic use of sunflowers has been expanding, with an expected doubling of U.S. sunflower oil use in the past two years. The 1978-79 crush will total 385,000 tons. Expanded crushing capacity will increase the crush from the 1979 crop.

In 1978-79, exports are expected to total about 1.3 million tons. Western Europe, Eastern Europe, Mexico and Venezuela are the major importers. For the market to clear the supply,

exports must increase again in 1979-80. To avoid a sharp buildup in carryover, exports for 1979-80 will need to total 1.4 to 1.5 million tons. A large proportion of the sunflower exports are through the Duluth port, so the current shutdown significantly affects sunflower exports and likely will result in lower total annual shipments in the year ahead.

Sunflower prices are difficult to predict, because the market is new and a prolonged Duluth strike will hurt exports and domestic prices. The world vegetable oil price is expected to be lower in 1979-80 than in 1978-79. Sunflower oil prices are expected to be in the low 30¢/lb range. This means about 12¢ worth of oil per pound of sunflowers. After subtracting transportation and handling, sunflower prices are expected to average about 10¢/lb for 1979-80.

# Wheat

by Willis Anthony and Fred Benson

## 1978-79 review

WORLD wheat production in 1978 was up 15% over 1977 and consumption was up 3.5%. The main reason was because the USSR produced about 13 million metric tons more than it consumed in 1978. However, decreased wheat crop prospects for the USSR in 1979 have stimulated the world market.

In the U.S., wheat prices at terminal markets were just over \$3/bu (13% protein) at harvest last year (Figure 3). By late October, prices had risen to \$3.60. Export demand at the waterways was strong and farmers were not active sellers. The sharp price run-up in late June was associated with declining estimates of the crop in the USSR and in other exporting countries.

Greater domestic and export use in 1978-79, coupled with the lower supplies, caused ending wheat stocks to drop about 20%—the first carryover stocks reduction since 1974-75 (Table 7).

The supply/use balance was not as favorable for hard spring wheat, because of large carry-in stocks, but larger exports resulted in a 4% reduction in ending carryover.

## 1979-80 supply

The world wheat crop is expected to be down about 7% in 1979-80 (Table 8). Although carry-in stocks are up, total supply will be off about 2%. Among the major wheat growers, China and India are up, while the USSR is down about 25%. In the major exporting countries, the crop also is down—about 14% in Canada, 18% in Australia and 10% in Western Europe.

Both wheat acreage and yields are up in the U.S. The expected crop at 2.133 billion bushels, added to 922 million bushels of carry-in stocks, provides a total estimated supply of 3.057 billion bushels of wheat.

Spring wheat acreage is up about 9% from last year. But, because of expected lower yields, USDA's production forecast for hard spring wheat is down from last year (Table 9). Total supply for hard spring wheat likely will be down about 4% in 1979-1980 Ag Outlook/h

Table 7. Supply and utilization of all wheat by marketing year

	1977-78	1978-79	1979-80
	million bushels		
Beginning stocks	1,112	1,177	922
Production	2,036	1,799	2,133
Imports	2	1	2
Total supply	3,150	2,977	3,057
Food use	586	591	595
Seed	80	87	95
Feed	183	183	175
Exports	1,124	1,194	1,400
Total use	1,973	2,055	2,265
Ending stocks	1,177	922	792

Table 8. World wheat production and consumption estimates for the world and selected countries

	Total world	U.S.	Production				China
			Canada	USSR	West Europe	East Europe	
	million metric tons						
1979	407.8	58.1	18.3	90.0	53.3	30.7	48.0
1978	437.9	49.0	21.2	120.8	58.6	35.9	44.0
1977	381.4	55.1	19.8	92.2	58.3	34.2	40.5
1976	415.1	58.3	23.6	96.9	50.7	34.6	45.0
1975	348.9	58.1	17.1	66.1	48.6	28.5	39.0
1974	356.4	48.9	13.3	83.9	56.7	34.2	37.0
1973	372.3	46.4	16.2	109.8	50.8	31.5	34.4
	Consumption						
1979		23.6		112.0	50.7	37.2	52.0
1978	411.7	23.5	4.8	112.0	50.7	37.2	52.0
1977	397.5	23.2	4.8	107.0	49.3	37.4	49.1
1976	380.0	20.7	5.0	92.5	49.1	38.3	48.1
1975	347.8	20.1	4.9	87.7	49.3	33.7	41.2
1974	359.2	19.0	4.8	90.4	51.5	36.0	42.7
1973	368.1	20.6	4.6	99.2	49.5	35.0	40.0

Table 9. Supply and use of hard spring wheat by marketing year

	1977-78	1978-79	1979-80*
	million bushels		
Beginning stocks	250	335	322
Production	399	380	366
Total supply	649	715	688
Domestic use	158	161	164
Exports	156	232	225
Total use	314	393	389
Ending stocks	335	322	299

\*Forecast August, 1979

80. Continued delayed harvesting could result in further declines in yield and quality.

## 1979-80 use

Total domestic use of wheat in 1979-80 will be about 865 million bushels. This would account for 38% of total use. It will be up slightly from last year because of higher food use. Wheat feeding will be down, unless quality problems with the balance of harvest force more into feed channels. It appears that hard spring wheat will take its share of the domestic food increase.

U.S. wheat exports will be up—because world wheat supplies will be down (Table 8) and many countries

will try to maintain their level of consumption. This particularly affects the U.S. wheat market. While the U.S. accounts for only about 15% of total world wheat production, we account for about half the world wheat exports. Total wheat exports are expected to reach 1.4 billion bushels (a 17% gain over last year) and would account for 62% of use. Exports of hard spring wheat may be down slightly from last year, due chiefly to unavailability of the Duluth port early in the marketing year.

If total use develops as forecast, U.S. wheat stocks will be cut about 15%. The lower world wheat crop will stimulate demand for U.S. export wheat. The tighter supply will cause



importers to bid more aggressively for supplies. But supplies will not become perilously tight unless there are major crop production problems in 1980.

### 1979-80 prices

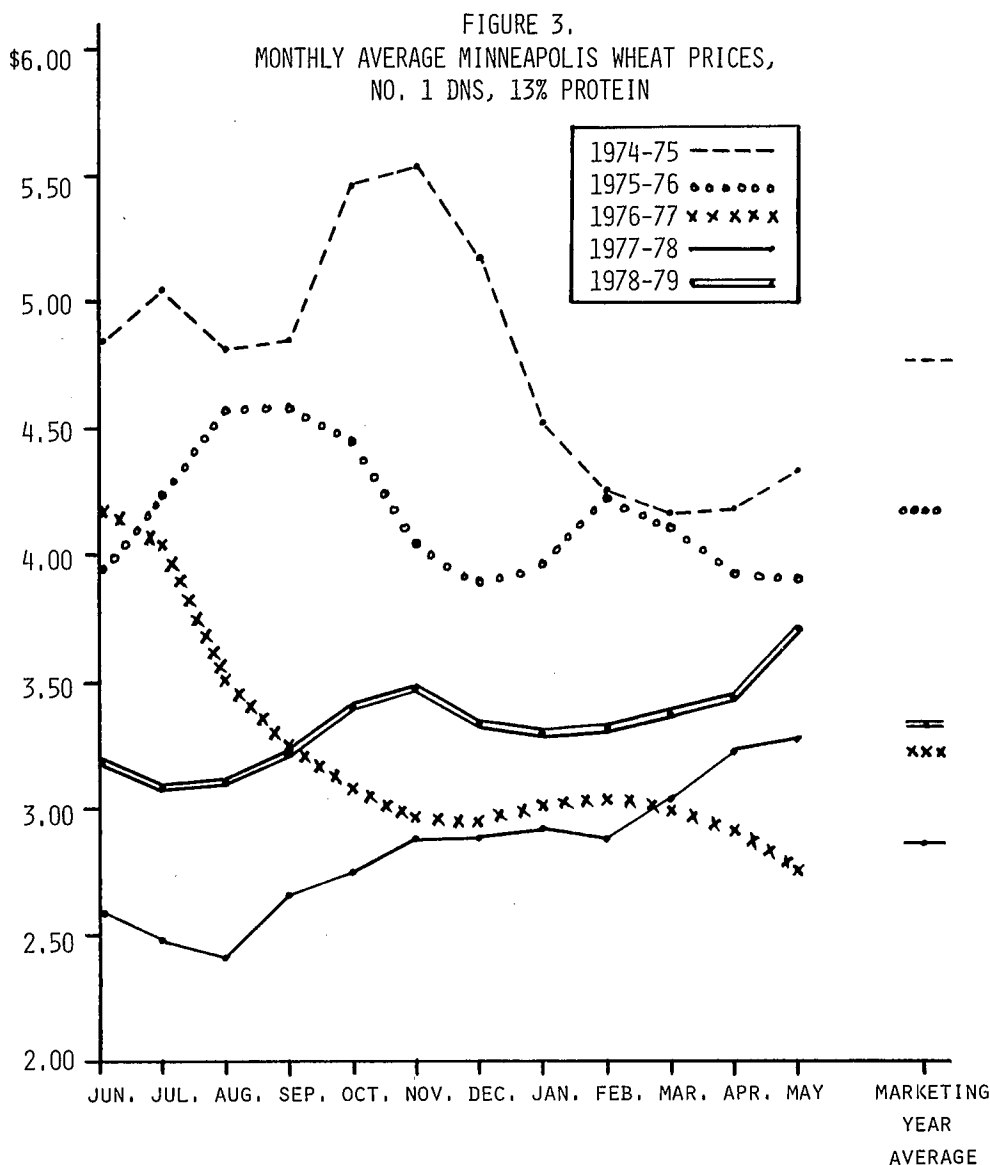
Prices for the 1979-80 marketing year probably will be about 30% above 1978-79, because stocks are being reduced. U.S. farm wheat prices are forecast to average about \$4/bu. Minneapolis terminal market price (13% protein) now is expected to average about \$4.30/bu through spring 1980.

Protein premiums are not expected to be high, due to the quality of the winter wheat crop and the nature of the demand pulling the market. Because of likely hard spring wheat supplies and severe transportation problems, hard red spring wheat prices are not expected to return to their "normal" premium over other wheat classes.

### Pricing management

With a forecast terminal market price average of \$4.30/bu, sellers should refrain from pricing any of their crop when prices are lower than expectations, but they should do some pricing as prices move higher. Price often peaks in late fall. It usually pays to store from harvest until then, or to forward price at that time. Peak points at other times of the year are less predictable. Often, longer storage costs can exceed the price gains.

It does not now appear that transportation problems will be alleviated within the 1979-80 marketing year. Hence, it probably will be useful to



think in terms of separating the pricing and the delivery decision. When prices are strong and movement is tight, for-

ward contracting or the futures market bear consideration, but delivery specifications must be watched carefully.

# Grain Marketing Management

by Fred Benson and Willis Anthony

PRICING management involves making decisions with respect to one's uncertainty about market prices and taking actions that will increase average selling price for the year, while reducing price risk.

During periods of uncertainty, you can do two things: 1) Improve your forecast about the probability of future events, and 2) Improve your ability to survive unfavorable outcomes. Predicting future events with any de-

gree of accuracy takes time, knowledge and effort. But a little predicting and concentrating on strategies to meet risk and uncertainty in the marketplace can pay off quite handsomely.

Pricing at several times during the year allows you to spread your sales and work for beating the seasonal average price. If you expect net prices (after storage costs) to improve, delay pricing most of the crop. This is called

"scaling up." If you expect net prices to decrease, most of the crop should be forward-priced early in the season when prices are higher. This is called a "scaling down" pricing pattern.

Minimize risk by marketing so that you are positive of providing enough cash for your cash obligations and enough grain for your farm livestock needs. The rest of the crop may be used for speculative purposes.

Transportation problems are occur-

ring more frequently in the grain market. It will be beneficial to keep abreast of these problems and market accordingly. Take opportunities to price some of your grain when prices

move above your seasonal average expectation. Remember to consider storage costs. Use the following table as a guide to expected storage costs accumulating by months.

slaughter—the primary source of hamburger beef—was down a whopping 35%.

This sharp cutback, plus general consumer expectations of rising beef prices, stimulated more forward purchasing throughout the beef chain (from consumer through packer-buyer), resulting in a significantly larger run-up in beef price than would otherwise have occurred.

The initial adjustment to these high prices came in late May and early June, as both cattle and hog marketings increased from the very low April levels. Then retail demand grew sluggish in June and July as business at fast-food places dropped off—in part because of gas shortages. (Meat sales at McDonald's and Burger King were 4% below year-earlier levels in June, while Wendy's was down 16%.) Retailers showed their usual reluctance to decrease prices as fast as carcass prices declined, leading to record-high retail margins. Also, packers were faced with a drop in byproduct values that took about \$3 off live cattle prices.

The independent truckers' strike, plus declining prices, delayed movement of fed cattle out of feedlots. This

**Table 10. Cumulative variable costs of storing corn, soybeans and wheat, 1979-80**

Place of storage	Months in storage									
	1	2	3	4	5	6	7	8	9	10
\$/bu	Cents per bushel									
<b>Corn</b>										
2.00 Farm	4.0	6.1	8.2	10.2	12.3	14.5	16.6	18.7	20.9	23.1
Elevator	3.8	7.7	11.6	15.4	19.3	23.3	27.2	31.1	35.1	39.1
2.50 Farm	5.0	7.6	10.2	12.8	15.4	18.1	20.7	23.4	26.1	28.9
Elevator	4.3	8.6	12.9	17.3	21.7	26.1	30.5	34.9	39.4	43.9
<b>Soybeans</b>										
5.50 Farm	10.8	16.2	21.6	27.0	32.5	38.1	43.7	49.4	55.0	60.8
Elevator	7.0	14.1	21.3	28.4	35.7	43.0	50.3	57.7	65.1	72.5
6.50 Farm	12.8	19.1	25.5	32.0	38.5	45.0	51.6	58.3	65.1	71.9
Elevator	8.0	16.0	24.0	32.2	40.3	48.6	56.9	65.2	73.6	82.1
<b>Wheat</b>										
3.00 Farm	4.4	7.3	10.3	13.3	16.3	19.3	22.3	25.4	28.5	31.7
Elevator	4.7	9.5	14.3	19.2	24.0	28.9	33.8	38.7	43.7	48.7
4.00 Farm	5.9	9.8	13.7	17.7	21.7	25.7	29.8	33.9	38.0	42.2
Elevator	5.7	11.4	17.1	22.9	28.7	34.5	40.4	46.3	52.2	58.2

Assumptions: Interest rate—11%. Elevator charge—2¢ per month. Farm losses—corn, 1.0% plus .1% per month; beans, 1.0% plus .05% per month; wheat, .5% plus .05% per month.

# Beef

by Paul R. Hasbargen and Kenneth E. Egertson

THE PAST YEAR has been an excellent profit year for all segments of the beef industry.

Cow herds, after four years of losses, showed good returns in 1978 when Choice steer calves were sold last fall in the \$75 to \$85 range.

Overwintering programs also showed excellent returns as feeder prices continued to increase through the winter months, putting yearling steers over \$90 during the usual spring peak feeder cattle price period.

Cattle feeders enjoyed record-breaking profits during the 12-month period ending in July before red ink showed up on some lots sold in August.

## Review of 1978-79 marketing year

Cattle prices were in a general uptrend from August, 1978 to mid-April, 1979 (see monthly prices in Table 11). The uptrend carried prices to higher levels than had been expected by price analysts. Even now, looking back, it is difficult to explain the higher-than-expected prices received for all meat and milk during the first half of 1979. Beef supplies were running 10 to 15% below year-earlier levels. But cow

**Table 11. Choice steer price per 100 lbs, interior Iowa and southern Minnesota**

Month	1977	1978	1979
January	\$38.32	\$43.26	\$60.90
February	37.82	44.38	65.65
March	37.18	48.70	71.60
April	39.94	52.58	75.61
May	41.61	57.50	74.14
June	39.85	55.13	69.00
July	40.46	54.68	65.28
August	39.82	52.06	59.05**
September	40.41	54.28	
October	42.03	54.87	
November	41.49	53.93	
December	42.52	55.82	
Average	\$40.12	\$52.27	\$67.65***

\* 900 to 1,100 lbs  
\*\* For week ending Aug. 11  
\*\*\* Average of first 8 months

**Table 12. Feeder cattle price per 100 lbs, Sioux City**

Month	Choice feeder steers (500-700 lbs)		Choice feeder calves (400-500 lbs)	
	1978	1979	1978	1979
January	\$46.69	\$78.70	\$49.63	\$ 88.00
February	50.63	83.12	55.25	91.38
March	54.60	88.19	60.25	99.25
April	57.25	92.56	62.93	106.63
May	64.15	92.05	69.80	107.50
June	61.50	90.31	66.38	103.50
July	65.50	89.44	69.25	100.00
August	65.50	78.25*	69.10	88.50*
September	67.50		73.38	
October	66.63		72.88	
November	68.10		74.40	
December	72.75		81.88	
Average	\$62.12	\$86.58**	\$66.70	\$ 98.09**

\* For week ending Aug. 11  
\*\* Average of first 8 months

resulted in a buildup of heavier cattle that showed up in the USDA July 1 cattle-on-feed estimate. Despite the 6% drop in total numbers on feed compared to July 1, 1978, there were actually 3% more cattle on feed in the heavier weight groups—those likely to be marketed in the third quarter.

These heavier cattle, plus the continued sluggish retail movement of beef, put fed cattle prices under severe pressure in late July and early August when beef carcass prices dropped \$9 in nine business days. Additional holding of cattle, plus an Aug. 1 cattle-on-feed report that showed a 22% drop in feeder cattle placements in July, led to a rapid recovery of most of this loss by mid-August.

Yearling feeder prices generally have followed the price patterns of slaughter steers but also have reacted to changes in grain prices (Table 12). Choice 600 to 700-lb steers sold for more than \$90 in April and May, a sharp rise from the mid-\$60's of last fall. They dropped to near \$80 in late June, when feed grain prices were moving up rather sharply, then increased again as corn prices dropped back in July. However, the sharp break in Choice steer prices in late July and early August dropped feeder steers below the \$80 level for the first time since February. And 400-lb calves were priced \$20-\$25 less than their spring peak.

### Outlook for 1979-80

Beef supplies for the coming year can be forecast with a fair degree of accuracy. And most demand factors also can be projected with good reliability. However, the interaction of demand and supply often does not result in the "expected" price level for any particular period of the year. This is sometimes due to unpredictable outside occurrences, such as strikes or government actions, or it may be due to "mini-cycles" that occur in beef prices often somewhat independently of changes in beef supplies.

For example, the early August downtrend in beef prices took prices lower than "expected." Prices might remain somewhat below expectations for the next two months, just as the strong uptrend in all livestock prices in early 1979 kept beef prices higher than "expected" during the first several months of 1979.

**Supplies.** Supplies of beef will be

**Table 13. Budget for overwintering a steer calf in northern Minnesota, 1979-80**

	Per head	Per cwt
<b>Performance:</b>		
Purchase weight, lbs	430.	
Selling weight, lbs	650.	
Total gain, lbs	220.	
Average daily gain, lbs	1.22	
Days on feed	180.	
<b>Value produced:</b>		
Sale value at \$85/cwt	\$ 552.50	
Purchase cost at \$100/cwt	430.00	
Gross margin	122.50	\$ 55.68
<b>Feed requirements and costs:</b>		
Corn 9.00 bu at \$2.50	22.50	10.23
Hay 1.15 ton at \$35.00	40.25	18.30
Mineral .30 cwt at \$9.00	2.70	1.23
Total feed cost	65.45	29.75
<b>Operating costs:</b>		
Interest on animals (11.0%)	23.33	10.60
Death loss (1.0%)	4.53	2.06
Selling and buying costs	2.50	1.14
Other operating costs	6.00	2.73
Total operating costs	36.36	16.53
Total feed & operating costs	101.81	46.28
<b>Budgeted return to labor &amp; facilities</b>	20.69	9.40

### Return per head for labor and facilities with different prices

Selling Price/cwt	When purchase cost per cwt is:				
	\$94.00	\$97.00	\$100.00	\$103.00	\$106.00
\$ 81.00	\$22.16	\$ 8.43	\$ -5.31	\$-19.05	\$-32.78
83.00	35.16	21.43	7.69	-6.05	-19.78
85.00	48.16	34.43	20.69	6.95	-6.78
87.00	61.16	47.43	33.69	19.95	6.22
89.00	74.16	60.43	46.69	32.95	19.22

### Break-even selling prices that will cover feed, operating, and \$15/head return for labor and facilities

Purchase Price/cwt	When hay price per ton is:				
	\$28.00	\$31.50	\$35.00	\$38.50	\$42.00
\$ 94.00	\$78.66	\$79.28	\$79.90	\$80.52	\$81.14
97.00	80.77	81.39	82.01	82.63	83.25
100.00	82.89	83.51	84.12	84.74	85.36
103.00	85.00	85.62	86.24	86.86	87.48
106.00	87.11	87.73	88.35	88.97	89.59

Note: To cover only feed and operating costs, subtract \$2.31

**Table 14. Budget for feeding a yearling steer, 1979-80**

	Per head	Per cwt
<b>Performance:</b>		
Purchase weight, lbs	650.	
Selling weight, lbs	1150.	
Total gain, lbs	500.	
Average daily gain, lbs	2.20	
Days on feed	227.	
<b>Value produced:</b>		
Sale value at \$73/cwt	\$ 839.50	
Purchase cost at \$84/cwt	546.00	
Gross margin	293.50	\$ 58.70
<b>Feed requirements and costs:</b>		
Corn 40 bu at \$2.30	92.00	18.40
Silage 3.30 ton at \$18.00	59.40	11.88
Hay .30 ton at \$40.00	12.00	2.40
Pro. Sup. 2.30 cwt at \$9.00	20.70	4.14
Mineral .33 cwt at \$8.00	2.64	.53
Total feed cost	186.74	37.35
<b>Operating costs:</b>		
Interest on animals (11.0%)	37.40	7.48
Death loss (1.5%)	8.90	1.78
Selling and buying costs	20.00	4.00
Other operating costs	10.00	2.00
Total operating costs	76.30	15.26
Total feed & operating costs	263.04	52.61
<b>Budgeted return to labor &amp; facilities</b>	30.46	6.09

### Return per head for labor and facilities with different prices

Selling Price/cwt	When purchase cost per cwt is:				
	\$78.00	\$81.00	\$84.00	\$87.00	\$90.00
\$69.00	\$ 26.76	\$ 5.61	\$-15.54	\$-36.69	\$-57.83
71.00	49.76	28.61	7.46	-13.69	-34.83
73.00	72.76	51.61	30.46	9.31	-11.83
75.00	95.76	74.61	53.46	32.31	11.17
77.00	118.76	97.61	76.46	55.31	34.17

**Break-even selling prices that will cover feed, operating, and \$25/head return for labor and facilities**

Purchase Price/cwt	When corn price per bu is:				
	\$1.84	\$2.07	\$2.30	\$2.53	\$2.76
\$78.00	\$ 66.36	\$67.60	\$68.85	\$70.09	\$71.34
81.00	68.20	69.44	70.69	71.93	73.18
84.00	70.04	71.28	72.53	73.77	75.01
87.00	71.87	73.12	74.36	75.61	76.85
90.00	73.71	74.96	76.20	77.45	78.69

Note: To cover only feed and operating costs, subtract \$2.17

lower in the next 12 months than in the year just completed. Fed cattle marketings may be about the same in August and September as a year ago, but they will be down 5 to 10% in the fourth quarter and in early 1980. Unless grain prices jump this fall, cow slaughter will remain at least 20% below year-earlier levels, putting total beef supplies down by some 10 to 12% below the fourth quarter of last year.

The USDA July 1 cattle inventory estimates place the yearling supply of cattle at about 9% under year-ago numbers. Part of this unexpected sharp drop in available feeders comes from the fact that cow owners reported holding 8% more replacement heifers as they start rebuilding the nation's beef cow herd. Also, feeder cattle imports from Canada and Mexico have been a quarter under 1978 levels.

If these numbers are right, fed cattle marketings will stay below year-earlier levels, at least until well into the second quarter of 1980. The low fed cattle marketings of April and May, 1979, may be surpassed in 1980. However, given the current reduced numbers of feeder cattle, it is not possible for fed cattle marketings to be significantly greater than year-earlier levels before late 1980.

Year-to-year increases will be possible in late 1980, since the 1979 calf crop is estimated at only 1% lower than last year—a decrease that is being more than offset by a 35% drop in calf slaughter in 1979, resulting in a net increase of about one million extra calves available by Jan. 1.

However, as the cow herd rebuilding continues, this increase will be offset by larger heifer calf retention, thereby limiting any sizable buildups in cattle on feed throughout 1980. Thus, we expect total fed cattle slaughter in 1980 to be down slightly from 1979.

Cow and calf slaughter will remain low, making the next 12 months the lowest per capita beef supply months 1980 Ag Outlook/1

of this cattle cycle.

**Demand.** We are unlikely to see a repeat of the large jump in demand that occurred this past year.

First, there will be a more plentiful supply of competing meats as hog marketings exceed year-earlier levels by 20% this fall and 10% next spring. Poultry marketings will be up by 5 to 7%.

Second, the real incomes of many consumers actually will be lower as the economy moves through a mild recession during the next three quarters. Consumer debts are at record high levels, with savings at an unusually low level. Therefore, given high energy costs and a "recession" psychology, consumers may not want to compete quite as aggressively for the lower beef supplies in the coming year.

**Prices.** Putting demand and supply conditions together gives us an expected beef price the next 12 months that should be higher than the past 12 months. The average increase likely will be about equal to the general inflation level of near 8 to 10%. Cattle prices should remain above year-earlier levels this fall, due to the 12% expected cutback in supplies.

Markets are likely to be under supply pressure in August and September as large numbers of heavy cattle come out of feedlots. Uneven marketings could cause many price fluctuations and large discounts for heavy, overfinished cattle. Supply pressures should ease in November-December, allowing prices to recover to near the \$70 level before the end of the year. In the first half of 1979, Choice steers averaged \$69.50 at Iowa and southern Minnesota interior markets. A \$75 average would be needed in the first half of 1980 to equal an 8% inflation change.

**Management implications**

Feeder cattle producers should plan to get maximum production to take advantage of the excellent feeder prices expected during the next few years. Make sure all cows are bred.

Breed for early calving. Use growth implants. Overwinter calves if extra feed is available.

The odds look quite favorable that calf overwintering programs again will show above-average returns (Table 13).

Cattle feeders will want to buy feeder cattle early and/or consider contracting ahead on feeder replacement needs—to take advantage of the expected August-September beef market price lows for the year. Also, an early frost could give added impetus to feeder cattle price increases this fall.

Fall purchase of protein and additional grain needed for the coming feeding year can save money in two ways: First, by taking advantage of seasonal lows in feed prices, which may be even lower than usual this fall; second, by reducing the income tax bill due on the relatively high beef returns of 1979.

Risk management strategies should be developed that will facilitate some forward pricing of cattle during price run-ups such as occurred in each of the past two spring seasons, as well as the forward pricing of inputs during low-price periods.

# Hogs

by Kenneth Egertson and Paul Hasbargen

FOLLOWING a two-year period of relatively slight change in hog production, hog producers again responded strongly to favorable 1978 profits by expanding sow farrowings in the last quarter of 1978 by 11% over a year earlier and, in the first half of 1979, by 19%.

This expansion phase of a typical four-year cycle could carry through to the winter of 1980 before a reversal in year-to-year production change takes place.

**Review of recent market**

First half of 1979 commercial hog slaughter totaled 41.8 million head, up 9% from year-earlier levels. Slaughter has built up seasonally throughout 1979 from levels just slightly over a year earlier in early 1979 to levels running over 20% higher in early August. With average weights higher

**Table 15. Quarterly commercial hog marketings and prices, U.S., 1977-1980**

Year	Quarter	Number marketed million head	Percentage change, year earlier	Slaughter	Feeder pigs
				hogs 7 markets	northern Minn. 40 pounds
				Average price	
				per cwt	per head
1977	1	19.7	+13%	\$39.10	\$30.31
	2	18.7	+11%	40.87	36.68
	3	18.3	+2%	43.85	35.25
	4	20.5	-5%	41.38	30.05
1978	1	19.4	-1%	47.44	40.60
	2	19.0	+2%	47.50	48.25
	3	18.6	+2%	48.52	49.20
	4	20.3	-1%	50.00	49.50
1979	1	20.0	+3%	51.93	45.13
	2	21.7	+11%	43.00	40.56
	3	21.8-22.5*	+18%	35-38*	22-26*
	4	24.8-25.5*	+23%	32-36*	22-26*
1980	1	21.8-23.5*	+13%	35-39*	27-31*
	2	22.8-23.8*	+9%	36-40*	32-37*
	3	22.5-23.5*	+2%	39-43*	35-40*
	4	22.5-23.5*	-10%		

\* Estimated

than a year ago, total pork production increased by about 10%.

The increased levels of pork had to compete with increased supplies of poultry meats. But the demand for pork was strengthened by lower supplies of beef, higher incomes and increased population.

Slaughter hog prices over the first half of 1979 have reflected the build-up in slaughter supplies. Barrow and gilt prices have declined from a weekly average peak of \$56/cwt in early February to an early August level of about \$37/cwt, a decline of almost \$20/cwt (Table 15). Feeder pig prices also have shown the pressure from increased supplies and strong corn prices by declining sharply over the same time period by about \$30/head (from \$55 to \$25).

Profits on hogs sold through the first half of 1979 declined sharply from the excellent category early in the year to actual losses on hogs sold in August.

### Farrowing plans and projections

Despite the current low returns in hog production, which could cause adjustments in sow farrowings by second quarter 1980, conditions during the breeding season for sows to farrow this fall were sufficiently good to predict continued farrowing increases through 1979 and into early 1980.

In the June, 1979 *USDA Hogs and Pigs Report*, it was estimated that hog producers planned to increase June-August 1979 farrowings by 17% and September-November farrowings by 14%. The increase in June-August looks highly probable. However, producers still have time to change their minds for late-fall farrowings. Such an

adjustment could cut actual farrowings this fall from the planned 14% increase to a 10% increase.

What happens in the 1980 spring (December-May) sow farrowings will depend a great deal on what happens to both hog prices and corn prices during the sow breeding season this fall. Profits over this period generally will be lacking. It generally takes about two quarters of sub-marginal returns to turn the cycle, putting the turn-around into first half 1980. Therefore, chances are still high that expansion of about 5% could show up in the winter quarter of 1980.

If farrowing patterns follow those of a typical cycle, sow farrowings should decrease from year-earlier levels by second quarter 1980.

The chances appear high that this will happen, unless corn prices drop drastically from current levels by this fall. If they stay in the \$2.25 to \$2.50/bu range and hog prices do not move above \$35 in the fourth quarter breeding season, profits will be low enough to reduce some of the incentives for hog production. The decline in March-May sow farrowings from year-earlier levels then would be around 5 to 8%.

However, if the corn crop proves to be even greater than 7.1 billion bushels, and farm prices hover near the \$2 level, interest in hog production will remain at a high level. And, given the large recent expansion in hog building construction, these facilities likely would handle another slight expansion over the large farrowings of the past spring quarter.

Summer and fall farrowings in 1980 are likely to decline from the high 1979 levels as the hog industry shifts into the liquidation phase of the cycle.

### Market and price prospects

**Fall, 1979.** The sharp increase of 20% from a year earlier in the June 1, 1979 inventory of pigs under 60 lbs, along with the expected slightly higher gilt slaughter this fall, suggests that hog slaughter in September and into the fourth quarter of 1979 should run 20-23% above year-earlier levels. Slaughter weights are expected to average slightly less than a year earlier.

Demand for pork likely will be no higher than a year earlier. Therefore, hog prices will have to stay well below both year-earlier and current levels to clear the market of the 20% production increase. Chances are at least two out of three that barrow and gilt prices will average in a \$32-\$36 range in the October-December quarter of 1979. Feeder pig prices for 40-lb pigs in northern Minnesota likely will continue in the mid-\$20 per head range.

Average total production costs that prevailed for a complete hog enterprise over the spring and summer months of 1979 would require a break-even price on slaughter hogs this fall of \$42-\$45. Directly associated cash costs, including market value of home-produced grain, amounted to \$30-\$35. Therefore, fall-marketed hogs are likely to about cover direct cash costs—giving no return to pay family labor or facility overhead costs.

**First half 1980.** Hog marketings over the first half of 1980 will come largely from the June-November 1979 pig crop, expected to be up from 12-15% over a year earlier. This will mean continued heavy hog slaughter over the first half of 1980.

Slaughter hog prices likely will show gradual improvement throughout first half 1980, moving from the low \$30/cwt level in early January to a level of around \$40/cwt by mid-1980. Feeder pig prices are expected to show even more strength in response to reduced supplies and increasing fed hog prices, unless corn prices show an unusually large seasonal increase.

With prospects for continued increases in direct cash costs, including higher prices for home-produced grain, returns will remain near the level of direct costs for the complete hog program until near mid-year. Feeder pig producers will be getting some returns to labor and facilities as feeder pig prices rise above \$20/pig—but total costs will not be covered for many until 40-lb pigs get back over \$35.

**Table 16. Complete hog program—expected costs and returns with \$38 hogs and \$2.35 corn, average, 1979-80\***

Value produced	2 litters		Per cwt produced
14 pigs—230# @ \$38/cwt	\$1,224.00		
1 sow—400# @ \$30/cwt	120.00		
Total (3,620 lbs)	\$1,344.00		\$37.13
<b>Feed requirements and costs</b>			
Corn @ \$2.35/bu, 230 bu	\$540.50	356 lbs	\$14.93
Suppl. @ \$12/cwt, 2,400 lbs	288.00	66 lbs	7.96
Total feed	\$828.50	422 lbs	\$22.89
<b>Operating costs</b>			
Marketing and hauling	\$48.00		\$1.33
Breeding and veterinary	43.00		1.19
Electricity and fuel	15.00		.41
Grind and mix (\$3.50/ton)	26.00		.72
Equipment repair	18.00		.50
Interest and insurance	75.00		2.06
Total operating	\$225.00		\$6.21
Total feed and operating	\$1,053.50		\$29.10
Return for labor and facilities	\$290.50		\$8.02**

\* Use \$43-\$45/cwt for long-term planning price in 1979 dollars.  
 \*\* \$14.01/cwt return to labor and facilities over long term.

**Last half 1980.** Probable declines in late winter and spring 1980 farrowings will mean reduced hog marketings over this period—especially in late 1980—when compared both with a year earlier and with the first half of 1980.

It appears quite likely that hog prices could move above \$40 in the summer months of 1980 and remain in a range of from \$40-45/cwt throughout the third and fourth quarters of 1980. Feeder pig prices for 40-lb feeder pigs also should be above \$40/head in

most of the last half 1980. Therefore, it now appears that prices will return to levels about equal to production costs for typical average-cost producers before the end of 1980.

### Management implications

- Selling hogs at lighter weights this fall and early spring will mean less discount to the individual hog producer and reduced market supplies.
- Be careful about making production decisions based on current unprofitable price levels. You could be caught out of phase when the price cycle turns up later in 1980, if reductions are planned.
- Feeder pig finishers should watch contract prices carefully and evaluate them in terms of production costs and price level goals.
- Consider buying 1980 protein feed needs in late 1979. In addition to avoiding possibly higher prices, this action will help level hog enterprise earnings between 1979 and 1980 for tax management purposes.

# Sheep and lambs

by Kenneth Egertson and Richard Hawkins

THE NUMBER of sheep and lambs on U.S. farms and ranches on Jan. 1, 1979 totaled 12.2 million head, down 0.1 million from year-earlier levels. The 1979 lamb crop was estimated at 8.0 million head, practically the same as in 1978. This is the first time since 1959 that the lamb crop has not shown a decline. This is the smallest decline in sheep and lamb numbers observed for many years. It is possible that sheep and lamb numbers could level off next year.

Commercial lamb and mutton production for the first half of 1979 was about 5% below year-earlier levels. Lamb production over the last half of 1979 is likely to average about the same as a year earlier.

Fed lamb prices rose sharply from late 1978 to a late-April 1979 peak. This pattern followed fairly clearly the fed cattle price trend. Since then, fed lamb prices have declined about \$20/cwt—from \$80/cwt to the current level. This drop reflected a normal seasonal downturn in lamb prices as well as an increase in lamb supplies, a buildup in the supplies of other

meats and a general decline in other livestock prices.

Fed lamb prices could show some strength into the fall months of 1979, putting them back into the mid-\$60's per cwt. Prices should continue to strengthen into 1980, in view of the expected low lamb supplies and predicted strength in the cattle market.

Profits in native ewe flocks should remain fairly good in 1980, if herd managers stress high performance factors in production, especially lambs saved per ewe.

### Outlook for lamb feeding

Lamb feeding returns in the 1978-79 feeding year were generally good, except for lambs sold in March, when prices were depressed.

Feeder lamb supplies for the 1979-80 feeding year will be less than a year ago, reflecting the drop in the 1979 lamb crop. With the sizable corn crop developing, demand for this supply of lambs will be strong.

Feeder lamb prices are expected to continue strong this fall, possibly strengthening some if fed lamb prices

move up. This will put feeder lamb prices in the mid to high \$70's per cwt range, moderately higher than in 1979.

Fed lamb prices should continue strong in the first half of 1980, possibly moving back into the mid-\$70's per cwt by early spring.

Lamb feeding profits in the coming year look favorable but likely will not be as good as last year, in view of higher feeder prices, higher feed-lot costs and slightly lower fed lamb prices. Assuming \$2.25/bu corn and a \$75/cwt price for a 70-lb lamb, fed lamb prices would have to be at mid to high \$60's per cwt to cover all costs in the production of a 105 to 110-lb lamb.

### Management implications

- Ewe flock managers should continue to push for the high levels of efficiency typical of a commercial operation.
- Try to time sales with normal seasonal strength in lamb prices in early spring.
- Purchase or contract for feeder lambs as early as possible.

# Dairy

by Martin Christiansen  
and Kenneth Thomas

## Review and prospects for the rest of 1979

U.S. MILK production for the first half of 1979 was about even with a year ago. But indications are that, during the rest of 1979, production may move above 1978 levels, bringing total production for the year to 122.5 billion pounds (Table 17).

Sales of milk and dairy products showed some modest increases early in the year, but since then seem to have slackened somewhat. With some expected recovery in sales later in the year, commercial use for the year likely will show a modest gain over 1978 levels. Government price support purchases for first half 1979 totaled 1.3 billion pounds of milk equivalent, down from 1978 levels. Strong commercial demand to boost privately-held stocks was in part responsible for this reduction.

The Minnesota-Wisconsin price during the first half of the year averaged about \$1.50 above a year earlier (Table 18). Strong competition for manufacturing milk supplies lifted prices above support levels during the flush season. Milk prices for the remainder of the year are likely to show only normal seasonal increases.

Factors limiting the amount of the price rise include a modest increase in milk output, somewhat sluggish consumer demand, the somewhat larger commercial stocks of dairy products available, and the possibility of Commodity Credit Corporation sell-backs. The likelihood of a 75¢ rise in dairy price support levels, effective Oct. 1, will insure some market strength this fall, however.

## Prospects for 1980

Some expansion in milk supplies seems to be in prospect for 1980. We estimate an increase of one billion pounds. A continued favorable milk-feed price relationship should help restore gains in production per cow. The decline in milk cow numbers has slowed from the level of a year ago, and a large number of herd replacements are available. On the other hand, close culling, because of favor-

Table 17. U.S. milk supply and disappearance, 1978, with projections for 1979 and 1980\*

	1978**	1979***	1980***
	billion pounds		
Production	121.9	122.5	123.5
Less farm use	2.7	2.7	2.7
Marketings	119.2	119.8	120.8
Beginning commercial stocks	4.9	4.5	5.4
Imports	2.3	2.3	2.4
Total "supply"	126.4	126.6	128.6
Ending commercial stocks	4.5	5.4	5.4
Net government removals	2.7	1.3	2.2
Commercial disappearance	119.3	119.9	121.0
Total "disappearance"	126.4	126.6	128.6

\* Milk equivalent, fat solids basis

\*\* Dairy Situation, July 1979

\*\*\* Estimated by authors

Table 18. Minnesota-Wisconsin manufacturing milk price for milk of 3.5% milk fat, 1977 to date

Month	1977	1978	1979
January	\$8.19	\$ 8.91	\$10.55
February	8.16	9.00	10.52
March	8.31	9.09	10.59
April	8.60	9.24	10.63
May	8.62	9.25	10.67
June	8.60	9.26	10.76
July	8.65	9.33	10.87
August	8.64	9.68	
September	8.74	9.90	
October	8.74	10.18	
November	8.79	10.44	
December	8.87	10.60	
Season Average	\$8.58	\$ 9.57	

able cull cow prices, will tend to limit the expansion.

On the demand side, dairy product sales should continue to show a modest expansion—perhaps at the trend rate of 1% per year. Net government removals might be at the 2 billion pound rate—a little above the level for 1979, but below 1978 levels.

Under these conditions, we would expect 1980 prices received by dairy-men to be above the level for 1979. But the increase likely will be about in line with the increase in the support level. It also is likely that 1980 prices will show a more normal seasonal pattern, with some weakening during the high-production months and strengthening later in the year.

## Price support developments

The current minimum level of 80% of parity expires Sept. 30, 1979. However, chances are very good that legislation will be passed extending the 80% minimum; otherwise, the 75% minimum will go back into effect. The level of supports finally set will depend not only on the parity objective but also on the Oct. 1 level of the index of prices paid by farmers. Current projections are that 80% of parity will calculate out to be about \$11.28 for 3.5 milk, while 75% of parity will be 70-75¢ lower.

# Poultry

by Earl Fuller

## Eggs

A NUMBER of factors are at work—some on the supply side, some on the demand side—that will cause a narrowing of profits for egg producers in the next 6-9 months. Chick hatch, force molting and slaughter data suggest a continued mild increase in layers on farms. The rate of lay is approximating that of a year earlier.

Another consideration on the supply side is an expected increase in feed cost. Protein feeds may be lower priced, but feed grains will be more costly. But, as transportation costs increase, Upper Midwest producers will benefit from lower feed costs compared with both coasts. However, the advantage this generates for Minnesota will be offset partially by increased transportation costs for eggs.

Egg supplies are likely to be 2-3% above year-earlier levels for the remainder of 1979 and into the first quarter of 1980. However, egg demand likely will be up about the same amount. While pork supplies are increasing, beef supplies are not.

Egg prices likely will run 3-5¢ above year-earlier levels for the rest of 1979. Broken egg demand is becoming less seasonal but continues to take substantial quantities of available supplies. Cartoned egg prices, New York, large, per dozen, are expected to rise from the mid-60's to the low 70's by year end.

If egg supplies do not increase over year-earlier levels for the first half of 1980, prices are likely to remain at that level. However, if there is a 3% increase in egg supply, it will likely mean a 6-9% decrease in price over year-earlier levels.

Nationally, egg prices likely will drop below industry break-even cost

by February. Hatching reductions will follow.

#### Turkeys

Turkey prices will exceed USDA calculated break-even costs through the rest of 1979 and on into 1980. However, the difference between price and break-even cost will narrow appreciably. Feed and other input costs will continue to rise. The number of birds marketed will continue to rise such that price likely will be 10-15¢/lb less than it was in fourth quarter 1978.

The shrinking profit margins likely will show a cutback in chicks hatched in 1980, thus reducing expansion in the flock size.

#### Management implications

With feed prices likely to fluctuate between the limits implied by government feed program policy, a heavily-levered poultryman may want to consider forward pricing some feed and product to assure sufficient gross margin to meet cash-flow requirements.

Poultrymen's supply response to the expected 1980 feed prices may not cut back on production enough to assure positive returns over typical average production costs. However, if an individual producer can assure a positive gross margin by forward contracting feed and possibly product as well, 1979-80 may be the year to do so.

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# Vegetables and fruits

by Frank Smith\*

\*This section draws heavily on USDA Fruit and Vegetable Situation reports.

THE FRESH vegetable market this summer was characterized by slightly larger than year-ago supplies and sharply lower prices. Summer acreage for 14 fresh market vegetables was up 2%. There were larger acreages of broccoli, carrots, celery, sweet corn, eggplant, green peppers, spinach and tomatoes. But there were fewer acres in cabbage, cauliflower, cucumbers, escarole, lettuce and snap beans. The melon acreage also was down.

After record-high levels last winter, fresh vegetable prices declined sharply in the spring. Slightly larger supplies, coupled with an adverse transportation situation, were contributing factors. The farm price index of commercial vegetables was nearly 25% lower in April-June, at 206 (1967 = 100) than it was during the first quarter, at 273. The index is expected to decline further this summer in response to increased supplies and will average moderately lower than a year ago.

Acreage in major processing vegetables increased by 1% this year. In-

creases in acreages in tomatoes, winter spinach, green peas and snap beans were large enough to offset decreases in lima beans, beets, sweet corn, spring spinach and cucumbers for pickles. If average yields are realized, total contract tonnage will be slightly larger than last year and result in a larger 1979-80 pack. With increasing processing costs and other inflationary pressures, however, retail prices probably will be above last year's relatively high levels.

The 21.4 million cwt summer potato crop is only 1% larger than the small 1978 crop. This relatively small crop would normally mean higher prices, but large fall potato carryover and depressed spring potato prices adversely affected prices for the summer crop.

Fall potato acreage is estimated at 1.1 million acres, which is 6% less than the past two seasons and 1% below April 1 intentions. If production is reduced by 6% as compared to 1978, producer prices could average moderately to substantially higher than the \$3.11/cwt realized in the fourth quarter 1978.

Dry bean acreage is 6% lower than last year. With average yields, prices

for the major bean classes could average higher in 1979-80.

Fresh fruit supplies were large this summer—almost 11% more than last year's if the June 1 forecast of harvested non-citrus fruit holds. Larger production is forecast for all summer fruits, particularly sweet cherries, nectarines and peaches. Prices are expected to be reasonably firm because of strong demand and low processed fruit stocks. Larger non-citrus summer fruit supplies may dampen the increase in citrus prices during the summer.

Severely depleted stocks of canned fruit have resulted in substantially higher wholesale prices than a year ago. Contract prices for all soft fruit for processing are expected to be higher than last year, because wages and other input costs have increased. Export demand appears to be stronger than in recent years.

If the Aug. 1 U.S. apple crop forecast of 7.7 billion pounds holds, production will be 1% larger than last year and 15% above 1977. Eastern states production will be slightly above last year, the central states down 12%, and western states will be up 7%.