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Slow But Solid Economic Growth for Idaho and the Nation*

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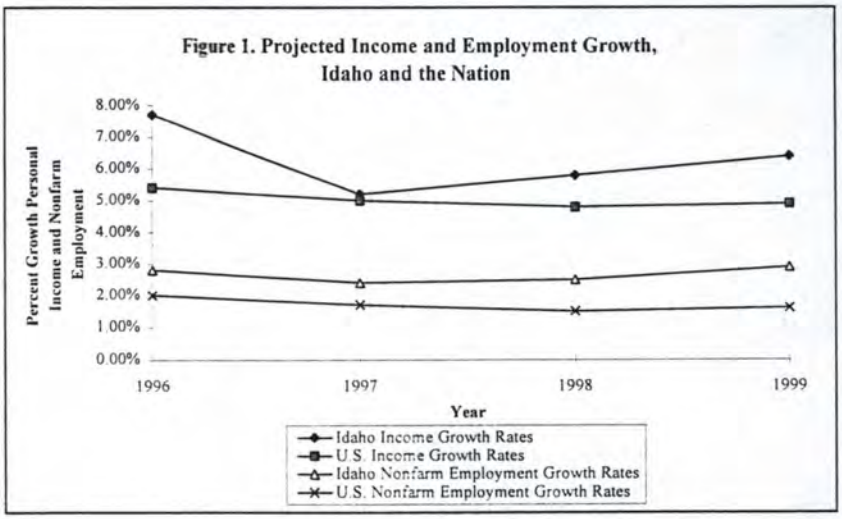
Economic conditions in the nonagricultural economy of Idaho significantly affect economic conditions in the agricultural economy of the state. Between 60 and 65 percent of Idaho farm households earn a substantial part of their incomes (greater than $10,000 per year) from off-farm jobs. Similarly, strengths or weaknesses in Idaho's agricultural economy impact the economy of the state as a whole. Agriculture is the state's largest industry. More that 30 percent of Idaho's gross state product is attributable to agricultural production and processing.

The substantial food industry in Idaho contributes greatly to stability in Idaho's economy. Computer manufacturing and computer chip manufacturing have become very important parts of Idaho's economy. Computers and chips make up a volatile industry in which substantial economic changes can occur even within the short time span of one year. The effects of such volatility on the general economy of the state are counter-balanced by agriculture's stability. Over the course of a growing season, the inputs that go into producing agricultural commodities do not vary greatly regardless of the yields and prices of the commodities. Also, a high portion of the supplies required for agricultural production are locally purchased and many of Idaho's agricultural commodities are processed within the state. Food processing is the state's largest nondurable manufacturing sector and the second largest manufacturing sector. So, relative to the manufacturing industries of the state, Idaho agriculture is responsible for a disproportionately large part of the state's value added income (gross state product).

Over the last few years Idaho's economic growth has substantially outstripped that of the nation as a whole. Economic growth in Idaho is expected to slow in the next few years. This slowing of growth has already begun. However, Idaho's economy is not expected to decline in the foreseeable future. In fact all indications are that it will continue to outperform the national economy, for which slow but positive growth is also expected, at least into the early twenty-first century (Figure 1).

Idaho non-farm employment, which grew by 5.6 percent in 1994 and 3.3 percent in 1995, is expected to increase by 2.8 percent in 1996 and only by about 2.4 to 2.5 percent in 1997 and 1998. However, it should be growing at a healthy rate of about three percent per year by the turn of the century. The state's personal income is expected to grow in a similar manner, slower than the last few years, but faster than the nation as a whole.

Figure 1. Projected Income and Employment Growth, Idaho and the Nation



* For more information about general economic outlook for the state of Idaho you can access the Internet website of the Idaho State Department of Financial Management at http://WWW.state.id.us/dfm/econinfo.htm

This forecast of subdued, but solid economic growth for Idaho and the nation is based on the expectation that inflation will not increase appreciably. Inflation occurs in an economy when more goods and services are demanded than can be readily supplied. This generally happens when labor markets are tight (unemployment is low) and excess manufacturing capacity is low (manufacturers cannot respond to increased demands). These conditions are fairly prevalent in the U.S. economy at this time.

However, in today's world economy there is rather substantial unemployment and excess manufacturing capacity. This is especially true for major U.S. trading partners of Germany, Mexico, Canada, and Japan and other Asian countries. All of these countries are in positions to be able to fill orders, which will help limit inflation.

So inflation is not a major worry right now. As the economies of the world become more interrelated it may be less of a worry in the future than it has been in the past. However, for the foreseeable future government policies to monitor and control inflation through activities of the Federal Reserve will continue to be very important to the U.S. economy.

Strong and stable state and national economies into the foreseeable future will benefit Idaho agriculture. Primary benefits will be reasonably stable agricultural input prices and continued opportunities for off-farm employment for members of farm families. However, Idaho farmers will face difficulties from other sources. Commodity prices will continue to vary. Also, under current farm programs, farmers will have to rely less on government payments to insulate them from the potentially devastating impacts of unanticipated low prices. So risk management will be increasingly important to farmers in Idaho and elsewhere in the U.S.

The situation and outlook information in this publication should help Idaho farmers, agribusinesses and policymakers (who work with Idaho farmers), understand the factors that will determine agricultural prices and farm income in the coming production year. These factors are directly related to the critical economic issues of supply and demand.

Better understanding of these factors should lead to better planning for the coming production year. Such planning is critically important to Idaho farmers and agribusinesses as it relates to decisions about how much of which commodities to produce. Planning relates to decisions about marketing strategies, risk management, needed financing, equipment purchases, fertilizer and chemical utilization plans, and land acquisition and sale decisions.

Certainly agricultural economists cannot see into the future. But they do have a good understanding of the factors affecting production costs and prices for Idaho commodities, and of ways to market these commodities so as to minimize income risk.

The information presented in the articles that follow is based on situation and outlook projections at this point in time. This does not represent the only efforts that the authors of these articles make to help farmers and agribusinesses understand farm prices, costs, and marketing alternatives over the course of the year. As more information becomes available over the year, these same authors will make that information available through all of the avenues of distribution that are available to them. Some of these include articles in magazines and newspapers, other media releases, publications from the University of Idaho, internet accessible websites, satellite programs, and public meetings arranged in cooperation with county extension educators from the University of Idaho at key times and locations around the state.

We hope you enjoy this publication and find good use for the information contained in these pages. If you have comments or suggestions on improving the quality of this publication and the articles included in it, please do not hesitate to contact me or any of the authors directly.

Wheat and Feed Grains

Larry Makus

World Situation

World grain supplies (wheat and coarse grains) ended the 1995/96 marketing year with the lowest level of stocks in 20 years and the lowest stocks to use ratio on record. Tight world stocks drove last spring's grain prices to record levels. During May of 1996, both wheat and corn export prices in the US reached the highest levels on record.

Wheat: Following the record high prices of 1995/96, world wheat production for 1996/97 is forecast at 579.1 million metric tons (MMT), an increase of 7.9 percent (Table 1). If achieved, this will be the second largest world wheat crop on record. All of the major wheat exporting countries expect expanded production in 1996. The US increased by 2.70 MMT (4.5%), Argentina is forecast up 5.3 MMT (57.6%), Australia is forecast up 4.02 MMT (23.7%), Canada increased 4.76 MMT (19.0%), and the European Union (EU) expanded 12.49 MMT (14.5%). Larger crops for exporting countries means competition for wheat exports is going to heat up during the 1996/97 marketing year. Within the major importing group, China, N. Africa, and the Former Soviet Union (FSU) expanded wheat production. As a result, 1996/97 world wheat trade is expected to decline to the lowest level since 1986/87.

Coarse Grains: World production of coarse grains is projected to increase by 11.2 percent in 1996/97 (Table 1). The increase in world coarse grain production is led by the US increase of 57.87 MMT (27.6%). Total foreign coarse grain production is expected to increase by 31.17 MMT (5.3%). Regarding foreign coarse grain producers, the EU, Canada, and China had notable increases. World coarse grain trade is expected to drop in 1996/97 due to the larger foreign crop and expected increases in feed wheat trade. Although 1996/97 world coarse grains stocks are projected to increase by 26 percent over 1995/96, stocks will remain at historically low levels (Table 1).

US Situation

Historically tight supplies of US grains (especially feed grains), was the key factor in setting record high farm level prices for corn and wheat during the 1995/96 marketing year. However, a significant recovery in 1996 US feed grain production (27.6%) is expected to moderate price levels in 1996/97. Production of corn (up by 25.6%) and grain sorghum (up 78.3%) account for the major increases in 1996 US grain production.

Wheat: The 1996 US wheat crop is forecast at 2.282 billion bushels, slightly above last year's crop of 2.183 billion bushels (Table 2). Slightly higher domestic use in 1996/97 (primarily due to higher feed use) will be more than offset by lower exports. Lower total use coupled with slightly higher production will increase 1996/97 wheat carryover by 15.7 percent (59 million bushels). However, 1996/97 carryover of 435 million bushels will still be below the 5 year average of 491 million bushels. Farm level wheat prices for 1996/97 are currently forecast in the $4.10 to $4.50 range, suggesting prices will be below the 1995/96 record farm level price of $4.55.

White wheat production totaled 355 million bushels in 1996, one of the larger white wheat crops on record (Table 2). Tight supplies of other classes of wheat (particularly hard red winter), and high feed grain prices kept white wheat prices relatively strong until mid-October. The 1995/96 season average price for Portland reached a record level of $5.35, with spot prices going well over $6.00 during May. Portland wheat prices moderated as the 1996 harvest approached, but stayed close to $5.00 through harvest. However, white wheat prices recently declined and went below $4.00 late in October.

Feed Grains: Planted corn acres for 1996 in the US are currently estimated at 79.6 million acres, well above the 71.2 million acres planted in 1995. Although there were some concerns about the potential impacts of late planting, the corn crop is currently forecast at 9.265 billion bushels. The 1996 corn crop will likely be the third largest US corn crop on record. The tight 1995/96 carryover of 426 million bushels will keep 1996/97 supplies at historically low levels, but well above last year. Higher domestic corn use is more than offset by reduced exports and higher production. Thus, 1996/97 carryover is expected to more than double to 1.107 billion bushels. Farm level corn prices for 1996/97 are currently projected in the $2.50 to $2.90 range. Although below the record high $3.24 farm level price for 1995/96, corn prices are still expected to be at historically high levels.

Prices for other major feed grains are projected to follow a similar pattern. Farm level barley prices reached $2.89 per bushel ($120.43/ton) for 1995/96. US barley production for 1996 is currently forecast at 397 million bushels, about 10 percent above 1995. Farm level barley prices for 1996/97 are currently forecast in the $2.40 to $2.80 per bushel range ($100-$117/ton), down about 10 percent from 1995/96.

Outlook for 1997

Tight supplies for wheat and feed grains are expected to continue through the 1996/97 marketing year. Tight supplies and the growing world demand for grains will be supportive of prices during the first half of 1997. However, the world has demonstrated its capacity for increasing grain production when prices remain strong. The historically tight supplies in the latter part of the 1995/96 marketing year were moderated by a substantial increase in world wheat and feed grain production in 1996. Thus, a repeat of last year's grain price levels seems unlikely based on current conditions. However, prices will remain volatile. For the near term, exports will likely be the source of volatility. As spring approaches, 1997 world grain crop conditions will become the dominant market force.

Wheat: US wheat supplies are tight but adequate, and world wheat supplies are significantly above last year. US wheat exports will be the major market factor for the next couple of months. However, the market will begin to focus on the 1997 crop early next spring. Given the generally favorable planting conditions for winter wheat and strong price levels, US wheat acreage and production will likely expand in 1997 (Table 2). A similar world response can be expected (Table 1). If production expands as expected, additional downward pressure on 1997 wheat prices is the logical expectation. Based on the projected expansion in world and US production, 1997/98 wheat prices will be off about 50 to 60 cents per bushel. Farm level prices in 1997/98 ranging from $3.50 to $4.20, and Portland white wheat prices ranging from $3.70 to $4.05 are currently projected.

If world or US production drops significantly below current projections, prices can certainly increase dramatically. Additionally, how aggressively the US responds to competition for wheat exports will be another source of uncertainty. If US exports for 1996/97 fall much below 1.0 billion bushels, additional downward pressure on wheat prices will likely result.

Feed Grains: Relative to wheat, feed grains are facing a much tighter stocks situation for the remainder of the 1996/97 marketing year. Thus, there is stronger price support for feed grains. Although current feed grain prices appear to be at seasonal lows, a price recovery comparable to 1995/96 is not likely. Waiting for some recovery is likely warranted, but don't set a price objective based on last summer's price levels.

With regard to the 1997/98 marketing year, price levels suggest an expansion of feed grain production. Although it is early to forecast how successful that attempt will be, the incentive certainly exists. At this point, an expansion of world coarse grain production seems the most likely

outcome. If such an expansion continues to develop as next summer approaches, look for additional downward pressure on feed grain prices. Changes in trade policy and US domestic farm policy along with expanding world demand for grains all suggest uncertainty in grain prices. Uncertainty supports price volatility, which makes price outlook more difficult and less reliable. Planning your marketing activities and expanding marketing alternatives is becoming increasingly important. Now is probably an excellent time to begin investing in your knowledge of marketing. That knowledge is likely to become increasingly important and valuable in the future.

Table 1. World Wheat and Coarse Grain Production, Use, and Ending Stocks, Marketing Years 1994/95 to 1996/97, and Forecast for 1997/98.

	Production		Use		Ending Stocks		
Year	MMT[a]	Annual % Change[b]	MMT[a]	Annual % Change[b]	MMT[a]	Annual % Change[b]	Stocks to Use Ratio (%)
Wheat							
1994/95	524.8	-6.2	548.9	-2.4	118.0	-16.8	21.5
1995/96[d]	536.9	+2.3	551.7	+0.5	103.2	-12.5	18.7
1996/97[e]	579.1	+7.9	571.5	+3.6	110.8	+7.4	19.4
1997/98[f]	590.0	+1.9	574.0	+0.4	119.2	+7.6	20.8
Coarse Grains[c]							
1994/95	868.4	+9.9	857.7	+3.4	133.8	+8.4	15.6
1995/96[d]	794.6	-8.5	837.6	-2.3	90.7	-32.2	10.8
1996/97[e]	883.6	+11.2	860.0	+2.7	114.3	+26.0	13.3
1997/98[f]	890.0	+0.7	863.0	+0.3	117.7	+3.0	13.6

[a] MMT = Million Metric Tons.
[b] Represents the percent change (+ for an increase; - for a decrease) from the previous year.
[c] Coarse grains include corn, barley, grain sorghum, oats, and rye.
[d] Estimated by USDA in the November World Ag. Supply & Demand Estimates.
[e] Projected by USDA in the November World Ag. Supply & Demand Estimates.
[f] Projected by the author.

Table 2. U.S. Wheat and White Wheat Balance Sheets for Marketing Years 1994/95 to 1996/97 and Forecast for 1997/98.

	Marketing Year			
	1994/95	1995/96[a]	1996/97[b]	1997/98[c]
Wheat		(billion bushels)		
Beginning Stocks	0.568	0.507	0.376	0.435
Production	2.321	2.183	2.282	2.550
Total Supply[d]	2.981	2.757	2.728	3.065
Domestic Use	1.287	1.140	1.343	1.200
Export	1.188	1.241	0.950	1.100
Total Use	2.475	2.381	2.293	2.300
Endling Stocks	0.507	0.376	0.435	0.765
Avg. Farm Price ($/bu)	$3.45	$4.55	$4.10-4.50	$3.50-4.20
White Wheat		(million bushels)		
Beginning Stocks	67	57	55	53
Production	304	325	355	375
Total Supply[d]	386	401	420	440
Domestic Use	107	108	152	120
Export	222	238	215	225
Total Use	329	346	367	345
Ending Stocks	57	55	53	95
Avg. Portland Price[e] ($/bu)	$4.25	$5.35	$4.78	$3.70-4.05

[a] Estimated by USDA in the November World Ag. Supply & Demand Estimates.

[b] Projected by USDA in the November World Ag. Supply & Demand Estimates.

[c] Projected by the author.

[d] Includes a small amount of imports.

[e] Portland average price is based on weekly average prices for the marketing year (July through June) for 1994/95 and 1995/96. For the 1996/97 marketing, the average price is based on July through October. The 1997/98 price is estimated by the author.

Cattle Situation and Outlook

C. Wilson Gray

What's in a cycle? How long can it last?

The beef industry has had a history of cycles since numbers have been kept on cows. As prices increase ranchers increase herd size. As the additional heifers begin to reproduce, total beef supplies increase. Eventually this leads to more product on the market than can be profitably sold to either domestic consumers or exported. As prices then decline, ranchers begin to reduce herd size and eventually reduce the total supply of beef enough that prices begin to increase again. This initiates a new cycle.

Trends

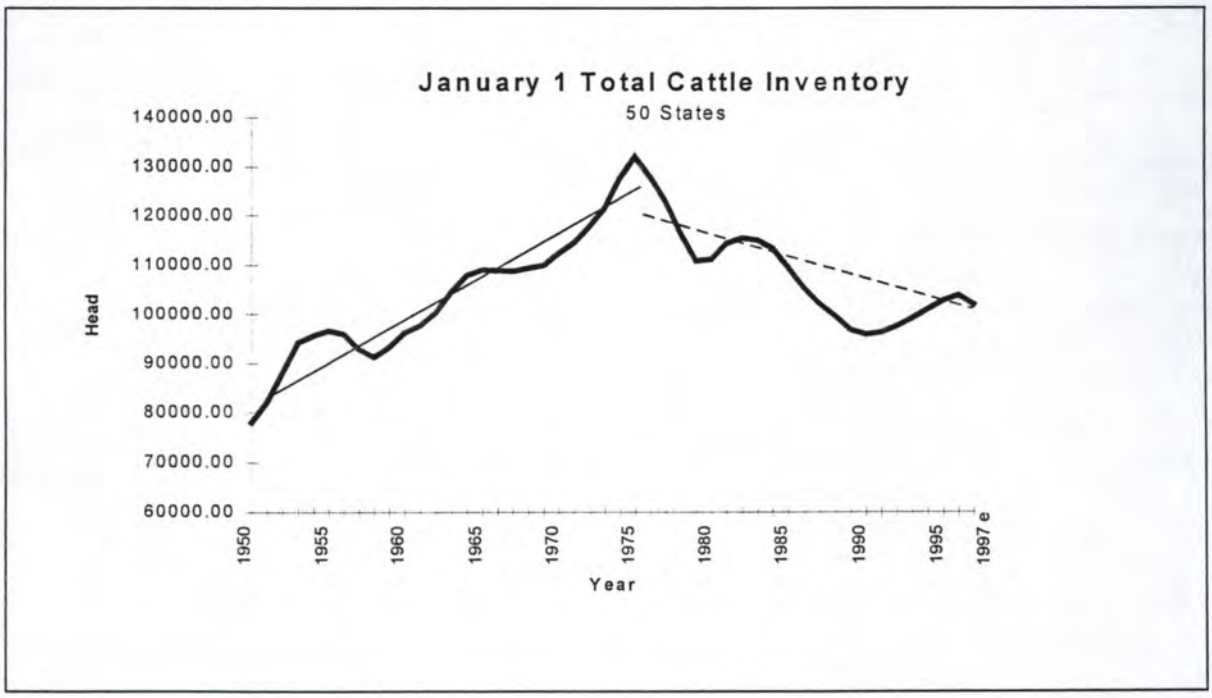
When discussing "cattle cycles" three types may be distinguished. These are the seasonal patterns, cyclic patterns and secular or trend patterns.

Seasonal patterns are regular recurring patterns that occur within the year. Cyclic patterns are those which follow a generalized pattern but have a length of several years from trough to trough. Trends are considered as a long-term direction and cover a number of cycles.

This cycle versus the past

Since 1928 there have been six full cycles. We are in the middle of a seventh. The six full cycles have averaged ten years in length with typically a six year growth phase and a four year liquidation phase.

Since 1979 several things have changed regarding cycles. The long-term trend had been for inventories to increase. The 1979-1990 cycle marked the first cycle that the inventory peak was lower than the peak of the previous cycle. Additionally, inventories increased only three years and liquidation lasted eight years. The year 1990 also marked the first time the trough was below the previous trough. Structural changes in beef demand and changes in price relationships between beef and other meats were contributors to this trend shift.



Can we blame Canada/Mexico for this mess?

The recent NAFTA/GATT agreements and the earlier CFTA agreement have been questioned as cattle prices have slipped. We like to sell to others but the idea of allowing them into our markets is not as appealing. In order to gain access to other markets we must often allow access to ours. In short, free trade is a two way street. Naturally the question has come up of the impact of these imports on U.S. cattle prices. These imports have added to U.S. supplies and at least in local areas no doubt have impacted cattle prices.

However, if we allow a 700 pound carcass equivalent for each head of cattle imported and subtract that amount from total supplies, U.S. beef production has still increased significantly in recent years.

Both live cattle and meat are imported/exported between the U.S. and Canada and the U.S. and Mexico. Trade with other countries, such as Japan, is nearly all meat. Due to declining net imports of beef in recent years the U.S. may be a net exporter of beef in 1996 for the first time since World War 2. This could be adversely affected however by the decline in imports by Japan due to last spring's outbreak of *E. coli*.

Canada imports and exports

Cheaper Canadian feed grains and excess capacity at U.S. processors have given incentives for importation of fed cattle. The slaughter destination points have been primarily Washington, Colorado, and Nebraska. Other factors include consistently higher U.S. cattle prices, favorable exchange rates and a reduction of import tariffs. NAFTA did little to change U.S.-Canadian live cattle trade since that was liberalized in the earlier (1989) CFTA agreement. Nearly all live cattle trade with Canada is in slaughter cattle (94% in '94 and '95). In 1995, imports of Canadian cattle increased 12 percent over year earlier figures and have increased 43.5 percent over 1995 for the January through August period. That pace would be a record number of cattle if it continues through the year.

However this situation is not likely to continue. Both Cargill and IBP have large slaughter plants in Alberta that are undergoing major expansions. That will reduce the flow of fed cattle to the U.S. in 1997.

A study by Montana State University compared U.S. and Canadian live cattle and meat imports and exports for 1994 and 1995. USDA data indicate that net live cattle imports increased 16.1 percent but net beef (meat) imports decreased 24.3 percent. Consideration of all trade changes would indicate a net price increase of $0.43 per cwt on fed cattle and $0.89 per cwt on feeder cattle. If the focus is only on net live cattle imports then fed cattle prices declined by $0.87 per cwt and feeder cattle by $1.74 per cwt.

Mexico imports and exports

U.S. imports of cattle from Mexico is primarily feeder cattle as contrasted with Canadian trade. Due to a severe drought and the rapid devaluation of the peso in late 1994, a record number of cattle were imported to the U.S. in 1995. Most of this movement occurred in the first half of the year. Mexican cattle imports in 1995 increased 54.2 percent over 1994. In 1996 for the January through August period they were down 87.5 percent from 1995, a considerable reduction.

Work done at Oklahoma State University indicates that for each additional 100,000 head imported in a month will reduce the price of 3-4 weight calves by $0.66 per cwt, 4-5 weight calves by $0.70 per cwt, and 5-6 weight calves by $0.52 per cwt. The highest import month in 1995 was March at 270,000 head. That would have impacted 4-5 weight calves by $1.89 per cwt or about $8.50 per head for that month.

Other export markets

The U.S. trades with countries other than Canada and Mexico. The total market must be considered when looking at beef trade. Five countries account for about 97 percent of U.S. beef trade. They are

Japan (57%), Canada (18%), Mexico (14%), South Korea (11%), and Taiwan (2%).

In 1995 beef exports accounted for about 7 percent of U.S. slaughter. Nearly all of our live cattle exports are to our two neighbors, Mexico (57%) and Canada (40%). Live cattle exports however are only equivalent to about 1% of U.S. slaughter.

It is important to consider beef trade on a dollar basis also. Comparing import and export values shows a trade surplus exists. In 1995 the total value of U.S. beef exports (meat, cattle, by-products, etc.) was $5.41 billion while we imported a value of $3.04 billion. Export value is nearly 2 times that of import values. This positive trade balance is a benefit to the beef industry compared to the situation if no trade surplus existed.

Forward planning -- what's the outlook?

Desperate times may require extraordinary measures to cope. For many operators, the down side of the cattle cycle often means moderate to extreme belt tightening, foregoing "luxuries" such as new equipment and trips or even major reductions in key areas such as repairs and family living. A common fallacy is that the most profitable operations have the lowest over all cost. Actually, the most profitable operations are those that generate the most NET income from the use of their resources. Often their cost per cow may be typical, but they are generating more units of production per cow, thus lowering their cost per pound sold.

Table 1. Total U.S. beef and live cattle imports and exports.

Year	U.S. BEEF EXPORTS Mil. Pounds	U.S. BEEF IMPORTS Carcass Wt.	U.S. LIVE CATTLE EXPORTS Thousand	U.S. LIVE CATTLE IMPORTS Head
1990	1006.4	2355.9	119.9	2135.0
1991	1188.5	2406.5	311.0	1939.1
1992	1323.8	2439.8	321.8	2255.3
1993	1275.0	2401.3	153.4	2499.1
1994	1610.8	2370.7	230.8	2082.5
1995	1820.8	2103.5	94.5	2786.2
1996 f	2074	2081		
1997 f	2025	2250		

f = forecast

Table 2. U.S. live cattle trade with Canada and Mexico.

	Canada		Mexico	
Year	Thousand Head	% of Prev. Year	Thousand Head	% of Prev. Year
1990	854.4	148.7	1261.1	144.4
1991	904.7	105.8	1034.2	82.0
1992	1270.5	140.4	981.7	94.9
1993	1202.3	94.6	1296.6	132.0
1994	1010.3	84.0	1072.1	82.7
1995	1132.7	112.1	1653.4	154.2
1996 (Jan-Aug)	1106.7	143.5	230.5	12.5

Have a business/marketing plan

Knowing operating costs is one part of a management plan. To really have a handle on one's ranch business affairs, more is needed. Analysis of records from farm and ranch associations in several states show that cost analysis, planning for marketing, and business management consistently payoff in a big way. The top 1/3 of profitable operations consistently have net income of three to six times that of farms in the bottom 1/3. During periods of low prices, these operations may still be profitable.

In addition to knowing what the operation's production costs are, a good set of basic financial records is important. From there one can develop and, hopefully follow, a marketing plan and analyze past records for areas to improve and refine plans for the future.

Plan for the next phase of the cycle

We are likely near the bottom of this cattle cycle. Most long-term forecasts put the peak in cattle numbers in 1996 and peak in beef production in 1997. This would indicate that prices are near their lowest. Low profits will cause herd reductions to continue as liquidation occurs for the next one to two years.

Counter-cyclic strategy would imply that for those financially able to maintain or expand herds, the next few quarters may offer some of the best prices this decade for doing so. Buying high-priced cows has rarely been profitable.

For those who need to solve immediate cash flow problems, some combination of the following will occur. Revenue will need to increase, expenses will need to be reduced, family living will take a hit, capital assets will have to be sold, off-farm employment will be sought to add to income, or debt payments restructured to improve demands on cash flow.

Regardless of the tactic used, one objective is likely to be maintaining a viable base herd to build with when profits begin to improve. With the associated uncertainty of forecasting prices, many operators feel that trying to plan is a futile exercise. The inability to see the future is why planning is so important. Having a plan gives a manager the strategy to find profits.

Beef price forecast

What are the pro's (Bull market) and con's (Bear market) of the situation?

BULLS
Feeder calf supply will tighten in 1997
Feedlot placements have been increasing
Slaughter weights are down
Feedlots have been profitable since August
High hog prices make beef more favorable
Cow slaughter will likely peak in first half 1997
BEARS
Corn prices are projected at $2.80 to $3.25, stocks will remain tight through next summer
Lack of profits are forcing more cows on the market
BSE & *E. coli* scares have hurt export market
Pork production is slated to increase in 1997
Poultry (broiler and turkey) production has increased
Beef consumption shows little or no change

Table 3 contains the second half of 1996 and 1997 quarterly cattle price estimates. The strengthening in late fall and early 1997 prices is predicated on a larger corn crop resulting in feed grain price moderation. It also assumes that the drought in the southern plains and Texas will not return and fall wheat pasture will be at least average providing a market for fall grass calves. A reduced corn harvest or lack of fall grazing would negatively impact these prices.

Table 3. 1996-1997 average cattle prices and forecast, PNW.

		1996		1997			
	Unit	III-p	IV-f	I-f	II-f	III-f	IV-f
Ch. Steers 11 - 1300	cwt	63-67	64-68	65-71	67-73	64-69	66-72
Steers 7-800	cwt	61-65	62-66	63-67	67-74	64-70	66-74
Steers 5-600	cwt	60-65	63-66	64-70	67-75	67-73	70-77
Utility Cows	cwt	29-33	25-30	25-30	29-33	28-35	28-35

p = preliminary; f = forecast

Dairy Situation and Outlook

C. Wilson Gray

National Situation

U.S. milk production for 1996 is projected to decline more than 1 percent, as cow numbers decline about 1 percent and milk per cow fails to grow. Farm milk prices are expected to exceed $15 per cwt, up a fifth from 1995. In 1997, responses to the higher 1996-97 prices are expected to restore milk output to the 1995 level and to lower milk prices by 75 cents to $1.50. Record prices for milk and cheese will bring recovery in U.S. milk production and declines in commercial use. However, the basic forces responsible for these prices–brisk demand, poor forage, and high concentrate prices–are expected to remain important through at least mid-1997. These factors will limit the size of price drops and make their timing highly uncertain.

Production Stalled

Dairymen were caught between high grain prices, poor quality feed, low cull cow and calf values and weather conditions on the one hand and record high milk prices and strong returns on the other. The negative forces have dominated, as shown by very flat per cow production. In addition, cow numbers have continued to decline nationally, just over 1% from 1995.

On Feed

Feed conditions will continue to trouble dairy farmers through at least mid-1997. Concentrate prices will stay high, hay prices may be very high, and hay quality will be suspect. Forage quality in particular probably will frustrate many farmers' attempts to expand milk production. Smaller production led to record prices for alfalfa hay during June-August, up $6 per ton from last year and $3 from 2 years ago. Fairly strong demand from dairy and beef feedlots is likely to combine with the smaller supplies to hold prices high until next summer. At current and expected milk prices, higher alfalfa prices would not be a major concern if high-quality hay were available. However, forage quality problems were widespread this season. Wet weather led to considerable rain-damaged hay and even more hay that was harvested much past peak quality. Additionally, weed problems reportedly were more common this year.

Cull and Calf Values

Beginning in the second half of 1995 livestock prices went south, depressing the beef industry. One impact of this has been to lower cull cow values to the $0.25 to $0.35 per pound range. Week old calf prices were down also, with reports of calves selling for less than auction costs at times. As a result many operators slowed their culling rate to avoid the lower cull prices. This has contributed to the trend of keeping per cow production relatively flat over the past year and a half.

Supply and Prices

Recovering milk production has eased very tight dairy markets. Exchange prices for cheese and butter have declined sharply from early peaks, although nonfat dry milk prices have held. By early 1997, wholesale prices will be considerably below September levels. However, first-half prices will remain relatively strong as brisk demand, forage quality problems, and high concentrate feed prices will keep dairy markets fairly tight.

Cheese output this autumn is expected to overtake sales. Buyers have secured holiday supplies causing 40 pound block prices to drop 21.5 cents in October. However, supplies are unlikely to mount enough to trigger dramatic price drops, at least until year-end. Since the Basic Formula Price (BFP) is based on plant prices from the month before, there is a lag in when lower prices will show up at the farm gate.

Wholesale prices by next winter will have dropped seasonally and will be well below current levels. However, prices are expected to stay considerably above those of a year earlier, as dairy markets are likely to stay relatively tight until mid-1997. Farm milk prices are projected to be above a year earlier during the first quarter, but then to run lower during the rest of 1997. This year's strong prices should bring stronger milk production next year. Meanwhile, delayed response to 1996 price increases should slow growth in commercial use, even if demand is strong.

Milk prices in much of 1997 will be dominated by strong demand, forage quality problems, and high grain prices–even if the force of these factors is less than in 1996. Prices are projected to average above $14 per cwt for only the second time. Potential price weakness is much greater for 1998, if 1996-97 milk prices and an improved feed situation were to generate a flood of milk.

Average retail dairy prices in 1996 are expected to rise 6 to 7 percent, the first time since 1990 that dairy prices rose faster than the Consumer Price Index. In early 1997, increases in retail prices are expected to be large, but then more moderate. The 1997 average is projected to rise 2 to 5 percent from 1996.

East Versus West

Herd Expansion

Milk cow numbers continue to run slightly more than 1 percent below a year earlier. Although a significant number of producers probably would like to expand their operations in response to recent prices, the lack of a secure base of acceptable quality forage has been a substantial deterrent to growth.
In addition, expansion in western milk production has stayed relatively modest. Milk production in late 1996 and in 1997 is projected to resume gradual growth. Relatively high returns over concentrate costs are expected to overcome feed problems. Fourth-quarter output is projected to be near a year earlier, while 1997 growth is expected to offset 1996's 1 percent decrease.

Milk per cow finally increased over year ago levels in August, indicating feed quality problems may be turned around. However, it is only up 1.4% from two years ago, where a normal increase would be over 1% per year.

Idaho and the growth factor

Since 1993, total milk production increases in Idaho have been phenomenal–16% in 1994 and over 12% in 1995 and 1996. This accelerated pace moved Idaho into eighth place in national milk production, over Ohio, and will eventually close the gap between Idaho and Washington (see Chart). In June, Idaho reached an all time record number of dairy cows (252,000 head), exceeding the old record of 251,000 head set in 1944. The states' dairy herd has been growing at about 2,000 cows per month. With per cow production essentially flat, the increased production has come from more cows. Idaho will see the year end with about 268,000 cows on hand.

Is 12% Growth Sustainable?

The question becomes "how long can this continue?" With planned expansions in processing capacity and the prospect of lower grain costs and a larger forage supply, growth in milk supply will likely continue at a pace between 10 and 14 percent in 1997. As feed quality recovers and grain prices moderate, production per cow will increase toward the long term trend as well. This could lead to quite large increases in total milk supply as more cows begin to increase their output. Thus, Idaho should continue to see double digit increases in milk production in 1997. If Washington maintains its five year average growth rate of 3.9% and Idaho can do at least it's five year average growth rate of 7.5%, Idaho may surpass Washington in total milk production in 1998.

Location

The old real estate maxim that the three most important things are location, location, location is also true for dairies. As dairies in the Magic Valley face more local scrutiny and some opposition to ever increasing cow numbers, other areas may become more desirable. The Treasure Valley may begin to see more dairies as operators seek suitable sites with minimum regulatory problems and plenty of available water. Elmore and Owyhee counties may also begin to see more interest if dairy operators decide the location, regulation and water situation is more favorable than elsewhere.

Regulatory climate and water are not issues in many areas of Eastern Idaho. It will be less desirable to many operators because of the more severe winter climate and the long distance to major processors. These two items will probably keep eastern Idaho dairy cow numbers near present levels in 1997.

Outlook for 1997

Feed

Grain is expected to become more affordable as the crop year progresses. Forage quality seems improved and supplies may become more abundant in 1997 as farmers compare the relative costs and returns of other crops.

Cull Values

Any improvement in beef prices will likely not arrive until later in the year. Thus, cull cow values and calf prices will continue to be a drag on the dairy financial picture for most of 1997. Heavy culling by financially distressed beef operations will keep cull cow values depressed through the first half of the year. Cull prices may stabilize by the fourth quarter.

Herd Growth

Dairy herd expansion will continue modestly in the western states. In other areas where herds have been decreasing, the trend will likely slow and could reverse if profitability is seen as sustained for the long term. Idaho will likely continue double digit growth in 1997.

Washington saw growth in milk production slow to a 2 percent increase in 1995 and drop about 1 percent in 1996. As conditions improve, milk production will likely move toward the long term trend of 3.9% annual increase in total production.

Markets and Prices

Recovering milk production has eased very tight dairy markets. Exchange prices for cheese and butter have declined sharply from early peaks, although nonfat dry milk prices have held. By early 1997, wholesale prices will be considerably below September levels. However, first-half prices will remain relatively strong as brisk demand, forage quality problems, and high concentrate feed prices will keep dairy markets fairly tight.

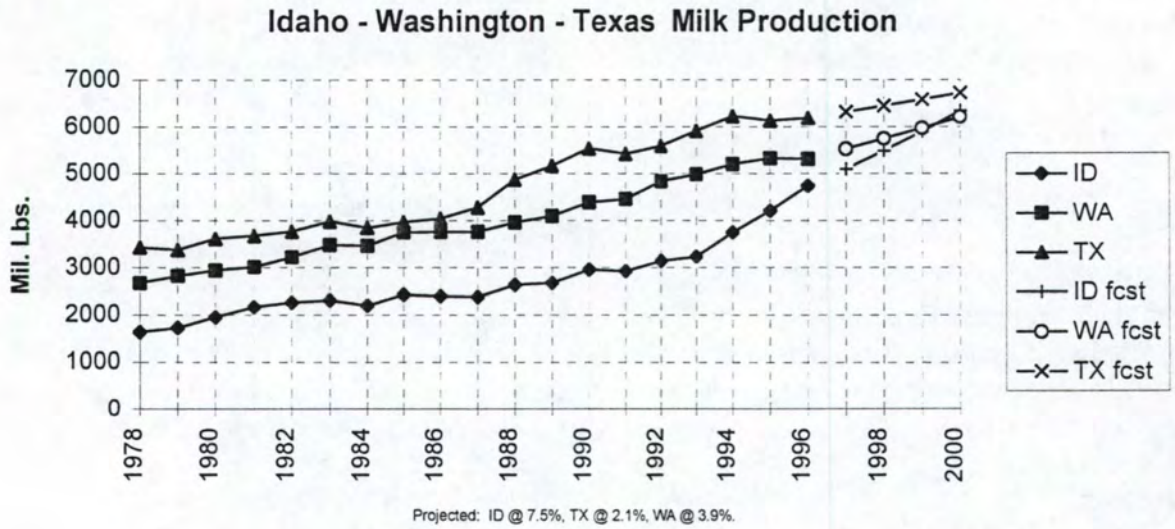
PNW operators will continue to enjoy a profitable situation in the first half of 1997. High, though not record, prices will combine with more favorable grain and feed prices to help keep profits in the picture. As production increases, the tight supply situation will moderate and prices will likely soften in the second half. New crop supplies and other factors will likely make-up the difference for most operators as costs and income return to a more typical scenario.

Table 1. Milk Price Outlook.

		Annual Average				1997 Quarterly				
Milk	Unit	1994	1995	96-p	97-f	I-f	II-f	III-f	IV-f	Long Term Ave.
Class I	cwt	12.40	12.20	14.90	13.45	13.50-15.00	13.00-14.25	12.25-13.50	12.25-13.75	12.00
Class III	cwt	11.88	12.05	14.30	13.20	13.30-14.80	12.75-13.45	12.00-13.50	12.00-13.50	11.50

SOURCE: USDA

p = preliminary
f = forecast; projections are by the author.



Potato Outlook

Joseph F Guenthner

Most Idaho potato growers harvested a high-yielding, high-quality potato crop in 1996. That's the good news. The bad news is that the large potato supply depresses open-market prices.

Supply

During the early and mid-1980s, people in the Idaho potato industry had a rule of thumb about potato supplies. The rule was that if the Idaho potato crop was smaller than 80 million cwt, open-market prices would be profitable. A crop larger than 80 million cwt brought unprofitable prices.

The principle still applies but the target has moved. The last time the Idaho crop was close to 80 million cwt was in 1986, when Idaho growers harvested 84 million cwt. Ten years later the target seems to have shifted up to about 135 million cwt. The 1995 crop, at 131 million cwt, brought profitable prices for most of the season.

The USDA estimated 1996 Idaho potato production at 140 million cwt, which is a new record, and up 6% from last year. Oregon and Washington growers also produced record crops. Production in the Pacific Northwest is up 10%. The US fall crop is 11% larger than last year.

Increased acreage was responsible for some of the production increase. Idaho potato growers harvested 408,000 acres, up 10,000 acres from a year ago and equal to the record of 1994. This is an increase of 2.5%. Washington growers expanded acreage from 147,000 to 161,000, an increase of 10%. Oregon acreage increased 20% from 53,200 to 64,000. For the entire Pacific Northwest, growers harvested an extra 34,800 acres, up 6%.

Potato growers across the US harvested 3% more acres than in the previous year. Eastern state acreage actually decreased 2%. Growers in the central states harvested 3% more acres. Western state acreage increased 5 percent, but growers cut acreage in California, Utah and Wyoming.

Increased yields also contributed to the record crop. Idaho's yield increased from 333 to 343 cwt/acre, a new record for the state. Yields increased across the PNW and in most other parts of the US. Higher yields were reported in all twelve of the largest potato-producing states. US fall crop yields continue on an upward trend in the 1990s, increasing from 302 cwt/acre in 1990 to a record 359 cwt/acre in 1996.

Potato quality is high in Eastern Idaho, but some Magic Valley growers were seriously hurt by net necrosis. The culprits are the potato leafroll virus and the aphids that spread the organism. Some of the infected potatoes are going to cattle feeders, who are ready buyers during these times of low cattle prices and high feed costs.

Storage shrink will be higher this year. Leafroll virus, late blight and field frost will create storage problems in a few areas. It is also typical for a higher percentage of large crops to not make it to market. During years of abundant supplies, rejections are more common and many packers tighten their grading standards to sell a premium pack.

Demand

A larger volume of potatoes will move through processed and fresh markets. The fresh market is the residual market after the processors acquire their raw product. Although the demand for processed potatoes continues to grow, a larger portion of the extra production will be forced into the fresh market.

The frozen fry market has long been the growth leader for the potato industry. Some analysts say

that the growth may be slowing. In spite of reduced summer processing, frozen fry stocks climbed to a record 946 million pounds in October. The slow down may be temporary. Potato market analyst Bruce Huffaker predicts that frozen processors will use 10.5% more raw product with this crop.

Demand for dehydrated potato products will continue to be strong in 1997. The driving force is the snack food industry. Frito-Lay's Baked Lays have been remarkably popular. Baked Lays are not made with traditional chipping potatoes. They are an extruded product made with dehydrated potatoes. Idaho growers who watch the Baked Lays television commercials can smile knowing that Idaho russet burbanks are going into those bags.

Demand for fresh potatoes has also been increasing in recent years. Consumption figures do not always show it because the fresh market is a residual outlet after the processors take their share of raw product. With a large volume of low-priced fresh potatoes hitting the market, many consumers get into the habit of eating more fresh potatoes. This habit can lead to stronger demand in the future.

Prices

Idaho open market prices will be lower than last year's. They certainly started out that way. Harvest-time prices are often the lowest of the season, but this year's $2.50 to $3.00 per cwt prices are below production costs for most growers. On average, Idaho potato prices rise about 80% between October and July. This year that means an increase to about $5.00 per cwt.

If the price pattern for the 1996 crop is like previous record crops the price potential may be higher. Late season prices for the record 1994 crop were double the October prices. The average price increase for the last three record crops was 195%. If that happens with the 1996 crop, some Idaho potatoes could sell for $6.00 late in the storage season.

If open-market prices rise to the $5.00 to $6.00 range, growers should sell rapidly. The price may not stay there long.

Futures

Potato growers have a new marketing tool for the 1996-97 marketing season. The New York Cotton Exchange (NYCE) began trading russet potato futures on September 17, 1996. Although futures prices started out low, there may be reasonable pricing opportunities later. Potato market analyst Wayne Smith says that with the old NYME potato futures contract, there were times during every marketing season when growers could lock in profitable potato prices.

Hay and Forage Outlook for 1997

Neil Rimbey

Idaho growers and feeders of hay can expect increased prices over what was seen in the 1995 crop marketing year. Increased demand resulting from growth in the dairy sector, coupled with declines in supplies, will both contribute to prices 15 to 20 percent above last year's levels. Federal government grazing fees will continue at the $1.35/Animal Unit Month (AUM) minimum level mandated under existing grazing fee legislation. State land grazing lease rates will be $4.58/AUM and private grazing lease rates will generally fall in the $10 to $15 per AUM range.

Supply

Hay acreage in Idaho declined 8.6 percent during 1996 to about 1.3 million acres. Alfalfa and alfalfa mixtures accounted for 1 million acres, and had declined over 9 percent from 1995 figures. Other hay acreage amounted to about 280,000 acres in 1996 and had declined 6.5 percent from 1995. Coupled with the declines in acreages, there were also declines in production. For example, alfalfa production per acre declined from the 1995 average of 4.1 tons per acre to 4 tons per acre in 1996. Total crop production amounted to 4 million tons of alfalfa (11 percent decline), 450,000 tons of other hay (21 percent decline) and 4.45 million tons of all hay (12.5 percent decline). Carryover stocks from the 1995 crop stood at 660,000 tons on May 1, 1996, a threefold increase from the short 1995 level, yet about on par with the long-term average carryover of 600,000 tons.

An estimate of total hay supply can be derived by adding the May carryover stocks to the 1996 hay crop. Using this approach, 1996-97 hay supply sits at 5.1 million tons (Figure 1 and Table 1). This is a decline of about 3.7 percent from 1995, but is still about 100,000 tons over the long term average of 5 million tons.

Demand

Dairies continue to drive the demand for hay in Idaho. Favorable milk prices have helped overcome increased feed grain prices and fueled further expansion in the Idaho dairy industry. Milk cows increased from 238,000 cows in September 1995 to 262,000 cows in September 1996. This approximate 2,000 head per month increase in dairy cow numbers amounts to demand for an additional 110,000 tons of hay (at 25 pounds of hay per day). Increased demand for the higher quality dairy hays is also pulling up the demand for the lower quality feeder hays. This in spite of the price doldrums that the beef sector is wading through at the present time. Beef cattle numbers are currently in the liquidation phase of the cattle cycle. Heavier culling of the beef cow herd is taking place, in many cases hoping to minimize winter feed costs of feeder hay that has been running 10 to 15 percent above last year's prices. The touch of winter weather that occurred in October seemed to fuel hay demand a bit, with reports of price increases of $10 to $15 per ton over what they were prior to the snowstorms.

Outlook

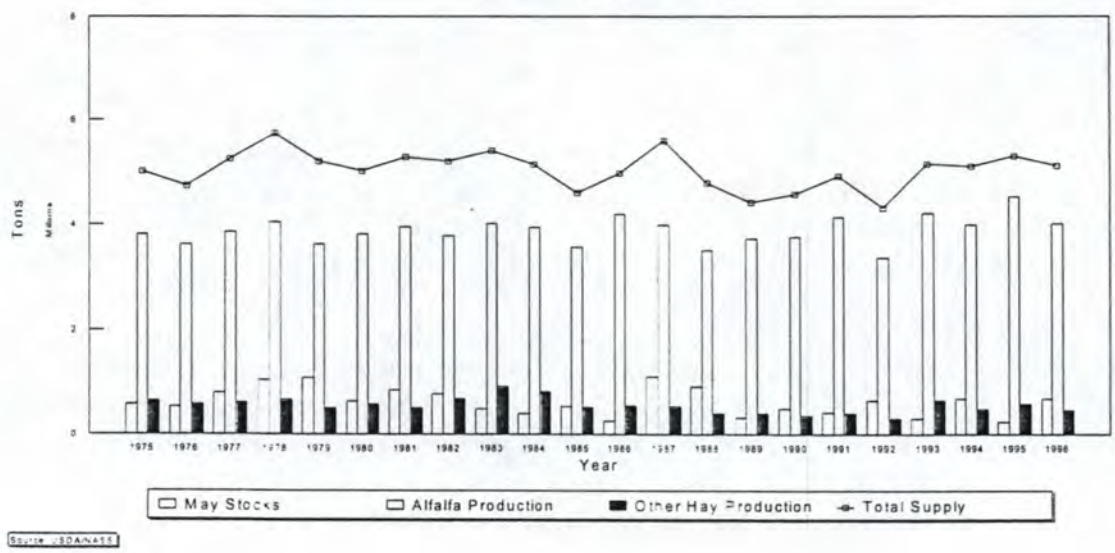
With increased demand for higher quality hays, the price strength that we saw through the fall will maintain through most of the winter and spring of 1997. Depending upon winter weather conditions and the winter feeding pattern for beef, there is potential for another $10 to $15 per ton increase in hay prices. In terms of market developments through the winter and early spring, there are several things to monitor in the months ahead. First, USDA-National Agricultural Statistics Service (NASS) releases an estimate of hay stocks on farms as of December 1 in the January Crop Production report. This will give the first indication of what is happening with the hay market. If this report shows Idaho hay stocks being in the range of 2 to 2.5

million tons, expect more upward pressure on prices, with potential for a 15 to 20 percent increase in hay prices later in the feeding period. The next critical point of reference is the severity and length of winter. Longer periods of colder weather will deplete stocks and result in higher prices. Finally, the March NASS Prospective Plantings report will give the first indication of the size of next year's crop. Given the uncertainties surrounding the potato price situation and sugar acreage, potential exists for substantial shifts in acreage to hay. How much of this shift will occur is anyone's guess, but the March report should give an indication of new acreage (and production) coming into the mix for next year's crop and thus give an inkling of market conditions for the 1997 crop.

Don't expect much help from our neighboring states of Oregon and Washington as far as providing additional markets for Idaho hay. Oregon hay supplies were up about 1 million tons over 1995 levels, to over 4.5 million tons. Washington production was down slightly, to about 3 million tons, but total supplies stood at 3.4 million tons. Export demand from the Pacific Rim countries has been strong, with estimates approaching 15 to 20 percent of Washington's crop going into that market. However, recent declines in the exchange rates of the Japanese Yen has softened demand. Also, our neighbors are much closer to the seaports through which most the hay is exported.

Range and pasture conditions are highly dependent on spring through early summer rainfall and temperatures. However, given the dominance of public grazing lands in the Idaho rangeland mix, several certainties exist. There has been no "political fix" on the grazing fee issue for federal lands and the industry is still operating on the Public Rangeland Improvement Act (PRIA) formula. This formula is heavily influenced by cattle prices during this past year. Given the depressed cattle markets, expect federal grazing fee for 1997 to again be at the $1.35/AUM minimum, as it was during 1996. State Land grazing lease rates are determined by a fee formula that tracks private grazing lease rates. Lease rates from 1995 are used to determine state land rates in 1997 (i.e. a 2 year lag in the model). This model calculated a 1997 rate for State Land grazing of $4.58/AUM. Given the fact that there is a high degree of correlation between years of private land grazing lease rates, expect 1997 lease rates for the state to average in the $10 to $15 per AUM range. Obviously there will be differences by region and forage type, but services provided by the landlord on grazing leases usually explain a large amount of the variation across lease rates. In other words, services such as providing salt, managing livestock on a daily basis, death loss and performance guarantees and others performed/provided by the landlord will usually elevate lease rates over those that are strictly for access to forage.

Figure 1. Idaho Hay Supply 1975-1996



Source: USDA/NASS

Table 1. Idaho Hay Production and Inventories, 1975-1996 (1,000 tons).

Year	Hay Stocks Jan 1/Dec 1	Hay Stocks May 1	Alfalfa Production	Other Hay Production	Total Crop Production	Total Supply
1975	2878	576	3811	630	4441	5017
1976	2576	533	3621	580	4201	4734
1977	2899	798	3852	607	4459	5257
1978	3344	1026	4050	658	4708	5734
1979	3531	1083	3631	495	4126	5209
1980	2682	619	3815	580	4395	5014
1981	3120	835	3960	493	4453	5288
1982	3073	757	3774	672	4446	5203
1983	2712	489	4017	897	4914	5403
1984	2850	393	3938	805	4743	5136
1985	3036	522	3570	510	4080	4602
1986	3304	245	4180	540	4720	4965
1987	4008	1086	3978	525	4503	5589
1988	3648	901	3496	385	3881	4782
1989	2183	310	3720	380	4100	4410
1990	2287	485	3744	340	4084	4569
1991	3221	408	4120	380	4500	4908
1992	2193	644	3367	288	3655	4299
1993	2955	292	4200	644	4844	5136
1994	2263	660	3978	460	4438	5098
1995	2794	222	4510	570	5080	5302
1996		660	4000	448	4448	5108
Avg	2931.29	615.64	3878.73	540.32	4419.05	5034.68
Max	4008	1086	4200	897	4914	5734
Min	2183	222	3367	288	3655	4299

1997 Edible Dry Bean Outlook

Paul E. Patterson

US dry edible bean production for 1996 was down 13 percent from 1995. The USDA's November estimate of 26.99 million cwt puts total production below the five-year average of 27.67 million cwt. Harvested US acreage of 1,705,600 was down 10.2 percent, while average yield of 15.82 cwt was down 3.2 percent. Weather during the production season was mostly favorable.

In the Pacific Northwest, 1996 production was down 12.2 percent with Idaho down 13.9 percent, Oregon down 3.8 percent, and Washington down 10.2 percent. Idaho harvested 20.0 cwt per acre on 93,000 acres compared with 20.0 cwt on 108,000 acres in 1995. Oregon's yield of 19.8 cwt was down 1.0 cwt from 1995 and the 10,100 acres harvested was up 100 acres from 1995. Washington's 1996 yield of 22.5 cwt per acre was up 0.5 cwt and the 36,000 harvested acres was down by 5,000.

The prices for all classes of dry beans produced in Idaho stayed fairly flat for the first half of the 1995 marketing year (September - August). The prices on Pintos, Pinks and Small Reds were poor, with Pintos staying between $16 and $17.50, Pinks at $18 to $18.50 and Small Reds at $19.50 to $20. The price on Small Whites was stronger, at around $23. Great Northerns had the strongest early market with prices between $28.50 and $30 from September through February. Prices for Pintos, Pinks and Small Reds increased significantly during the last half of the marketing year. Pintos peaked at $27 in June, Pinks were trading at $27 in August and Small Reds ended the year at $25. Small Whites ended the year at $27. Great Northerns saw weaker prices in the second half of the marketing year, trading between $26 and $29. Seasonal average price was $20.90 for Pintos, $27.95 for Great Northerns, $24.25 for Small Whites, $20.60 for Pinks and $21.60 for Small Reds.

Prices on the 1996 crop during the early fall were above prices during the fall of 1995 for all classes, except Great Northerns. Fall prices have stayed in a very narrow trading range of $24 to $27, except for Great Northerns at $22 to $23.

Exports for 1996 are projected to increase over 1995 by 10 to 11 percent. The US ranks second behind China in the dry bean export market and accounts for 13 percent of the world trade. But with a significant amount of US dry bean exports tied to PL-480 programs, exports are at risk as balanced budget considerations reduce funding. Domestic demand is expected to remain at current levels, with per capita consumption around 7.5 lbs. Consumption increases related to dietary considerations appear to have leveled off.

Improved prices on the 1996 crop and falling grain prices will encourage significant dry bean acreage expansion in 1997. With increased acreage and a normal growing season, US production should fall between 31 and 33 million cwt. Production at these levels will move the average price for the 1997 marketing year to the low $20's, a significant drop over the 1996 marketing year. While production over 33 million cwt is unlikely, this level of production would move prices to the mid to upper teens. The price estimates for the 1997 crop assumes exports of at least 8 million cwt and steady domestic utilization.

Table 1. Dry edible bean production, price and exports.

Year	US Production	US Exports	Idaho Production	Average Idaho Price
	(million cwt)	(million cwt)	(1,000 cwt)	(per cwt)
1992	22.62	6.50	1,584	$19.75
1993	21.91	6.8	2,091	$23.75
1994	29.03	7.8	2,691	$18.90
1995	31.03	8.1	2,052	$20.90
1996	26.99	9.0	1,953	$25.00

Source: USDA. Prices are for crop marketing year Sept. 1 - Aug. 31. Exports are for the calendar year. 1996 production and exports are preliminary, while 1996 price is author's forecast.

Sugarbeet Situation and Outlook: The Idaho Perspective

Russ Withers

Introduction

There are many factors to consider in the sugarbeet situation in Idaho. National sugar policy and the domestic market for sugar basically establish the arena in which prices are set. Other factors to consider include competition between sugarbeet processors within the U.S., competition from other sweeteners such as corn sweeteners, and non-caloric sweeteners, domestic sugar production, and profitability of other enterprises on the farm.

Current world sugar outlook as of October 1996 is as follows:

1. World sugar production is increasing along with consumption.
2. World sugar price is moderating from the high of 14.87 cents a pound in January of 1995. September 1996 world price was 12.29 cents.
3. Consumption is up substantially, particularly in Asia and Latin America.
4. About 29% of world sugar production is exported.

U.S. sugar production for fiscal 1996-97 is projected to be 7.05 million short tons, raw value, 4.6% below the recent 1995-96 estimate. Beet sugar is projected to be 55% of this total while cane sugar makes up the other 45%. U.S. consumption of sugar for 1996-97 is expected to be 9.83 million tons or about 1.3% above the latest estimate for 1995-96. Imports were 2.6 million tons for 1995-96 and are expected to be 2.74 million tons in 1996-97. As of September the raw sugar price was 22.4 cents a pound in the U.S. while the refined price was over 29 cents. Prices for refined sugar are expected to remain strong well into 1997.

High fructose corn syrup (HFCS) has substantially taken over the large beverage market in the U.S. and that is not expected to change. Prices for HFCS averaged 20.6 cents per pound for HFCS-55 (containing 55 percent fructose) and 18.52 cents for HFCS-42 for June through August of 1996.

Idaho sugar economics are closely tied to that of the U.S. Therefore it is expected that sugar prices will be favorable for the 1996 crop, which will be marketed through most of 1997. Idaho sugarbeet acreage for 1996 was down about 15,000 acres from the previous year. This was probably due to the unfavorable weather in the spring, higher prices for grains in 1996, and a negative reaction of a few growers to the company buyout. Higher sugar prices should encourage an increase in acreage in 1997.

Sugar Policy

Domestic sugar policy under the Federal Agricultural Improvement Act of 1996 (FAIR) is expected to continue at least through 2002. This should lend stability to the market for at least that long and somewhat insulate the U.S. market from the wide swings in the world market. This policy is largely a continuation of previous legislation which supported raw sugar at 18 cents a pound, with refined sugar a few cents higher. The new act establishes the support for refined sugar at 22.9 cents which was the same as last year's rate. Other changes in the act increased the marketing assessment on processors from 0.21 cents to 0.2654 cents a pound of refined beet sugar. Also loans to processors become recourse loans whenever imports fall below 1.5 million short tons. The chance of imports falling below 1.5 million tons is quite unlikely under the current sugar program. There is a penalty of 1.07 cents a pound for forfeiting sugar to the Commodity Credit Corporation (CCC). Nonrecourse loans from CCC will require 6.875 percent interest for 1996 crops compared to 5.875 for the 1995 crop. As of August 30, 1996, only 106,000 tons of beet sugar remained under loan with the CCC.

Growers to Own Company

The big news on the Idaho sugarbeet scene is the anticipated purchase of the processing and marketing company by the growers. While the deal is not final at the time of this writing, it appears likely to take place in the next few weeks or months. This has not been a unanimous decision among beet growers. Some farmers, especially those who are unable or unwilling to increase their debt at this time, have some reservations about the wisdom of this move. At the same time they may want to continue to raise sugarbeets on their farms. Change is often a painful process. Is the privilege of raising beets worth the $400 per acre investment required to buy into the company?

There is more to this than the privilege of growing beets. While buying stock in the company does give the right to grow and market sugarbeets, it is also an investment. If the company is successful, stockholders will earn a return on their investment in the company. In addition, the stock may increase in value which will be received when the stock is sold. Since the stock is not tied to a particular parcel of land, land values should not be affected very much by this change.

There are two reasons why the stock may increase in value. First, if sugarbeet production continues to be a profitable enterprise and farmers want to expand or new growers want to get into the business, there will be competitive bidding for the limited number of stock shares. Secondly, as the debt against the company is retired over a period of years, the growers will own a larger share of the company. If the loan can be retired in 12 years, as planned, and the company maintains its value, shares will increase in value. Shares are being sold to cover about one-third of the purchase price. When the loan for the other two-thirds of the value is repaid, the stock share will theoretically be worth about $1,200. It is also interesting to note that $400 invested at 9.5% interest compounded annually would have a future value of $1,189 at the end of 12 years.

The Purchase and Mr. Average Grower

Let's look at a hypothetical case of an average beet grower in southern Idaho. Mr. Average has a farm with 640 acres of irrigated cropland and produces 200 acres of sugarbeets each year. His average yield per acre is 25.8 tons. He hauls his beets 6 miles to the nearest beet piler and receives about $40 per ton for his beets or $1,032 per acre.

His cash expenses total about $800 per acre if he owns the land or $960 if he pays cash rent. This leaves about $50 to $200 per acre to pay the operator for his unpaid labor, the value of his equity capital, and management. Before he can decide whether or not to pay $400 per acre to raise beets he must decide if this enterprise will pay back the $400 over what could be earned on other enterprises. This will be an individual decision based on alternative enterprises, condition of beet equipment on the farm, and the financial condition of the owner. Opportunity costs should be considered in this decision. That is, how could the operator use his land, labor, and capital most effectively? Is there a more profitable way to spend $400 than for sugarbeets? Alternative enterprises must be evaluated to determine if beets will make the highest contribution to farm income. Now we will make the assumption that Mr. Average has decided that it is in his best long-run interest to continue to grow sugarbeets.

The annual opportunity cost of a $400 investment is $38.00 per acre (400 x .095). At the average yield of 25.8 tons per acre, $1.47 more per ton (38/25.8) will be required to support this investment. The total cost of the company is about $1,200 per acre. Besides $400 per acre paid for by the grower, the company will borrow $800 per acre for the remainder of the purchase price. The opportunity cost of this would be $2.95 per ton or $76.00 per acre. It is expected that increased income and appreciation of stock will more than compensate for these investments.

Mr. Average has decided to buy 200 shares of stock in the sugarbeet company. He has paid his $100

fee to become a member of the cooperative and $50 per acre initial fee or a total of $10,100. He now must borrow an additional $350 per acre to finish paying for the shares; a total loan of $70,000. If the interest on the $70,000 loan is 9.5% and the loan is to be paid off in 5 years, an annual amortized payment of $18,230 will be required. This would amount to about $3.53 per ton for principal and interest at 25.8 tons per acre. After 5 years the grower would no longer have this expense and cash income would increase by this amount. The debt repayment by the company would continue for another 7 years to complete the 12 year repayment period. Tables 1 and 2 give some information on the ability of the sugarbeet enterprise to repay debt. Table 1 indicates an adequate cash return for debt repayment in the short run with 22% return above cash costs. When all economic costs are included the picture is not quite so favorable. Table 2 indicates that economic costs per acre are higher than returns by about $55. Farmers with high debt/asset ratios may want to carefully consider this decision.

Table 1. Cash costs and returns for sugarbeets in Idaho, 1995.

	Cash cost per acre	Cash cost per ton	Percent of total cost
Variable cash expense	654.03	25.35	82
Fixed cash expense	142.74	5.53	18
Total cash cost	796.77	30.88	100
Cash return	1032	40.00	
Total cash cost	796.77	30.88	
Net return above cash cost	235.23	9.12	
Percent return above cash cost	22.8		

Table 2. Economic costs and returns for sugarbeets in Idaho, 1995.

	Economic costs/acres	Economic cost/ton	Percent of total
Variable cash expense	$ 654.03	$ 25.35	60.1
General farm overhead	$ 49.44	$ 1.92	4.5
Taxes and insurance	$ 39.72	$ 1.54	3.7
Capital replacement	$ 83.03	$ 3.22	7.6
Operating capital	$ 18.28	$ 0.71	1.7
Nonland capital	$ 38.68	$ 1.50	3.6
Land	$ 160.64	$ 6.23	14.8
Unpaid labor	$ 43.84	$ 1.70	4.0
Total	$ 1087.66	$ 42.16	100.0
Total value (25.8*$40)	$ 1032.00		
Total expenses	$ 1087.66		
Net above total cost	$ (55.66)		
Percent above costs	-5.4		

What does Mr. Average get for his investment?

1. The right to grow and sell 200 acres of sugarbeets per year.
2. A share of the earnings in the company.
3. The opportunity to gain from any increase in the value of share.
4. An assurance that the sugar industry will remain in Idaho (it has been here for over 90 years).

What are the obligations of Mr. Average?

1. The obligation to deliver beets from 200 acres.
2. Payment of $400 per share.
3. Get approval from the company for sale of any of his shares.

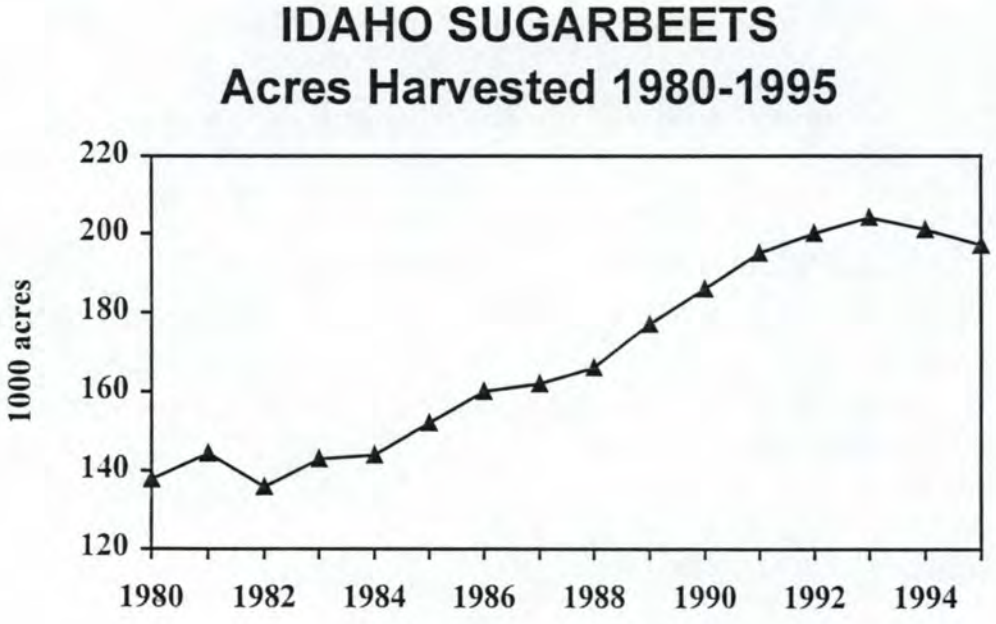
What are the risks involved with purchase of the company which would be borne by the producer owners of the company?

- Continuation of government price policy (There is some assurance until 2002)
- Diseases and insects associated with the crop
- Other enterprises becoming more profitable causing loss in value of shares
- Management of the company
- Loss of market to competitors
  - * beet sugar
  - * cane sugar
  - * corn sweeteners (HFCS etc.)
  - * non-caloric sweeteners
- Weather
- Energy and transportation availability
- Environmental requirements
- Legal liabilities and constraints

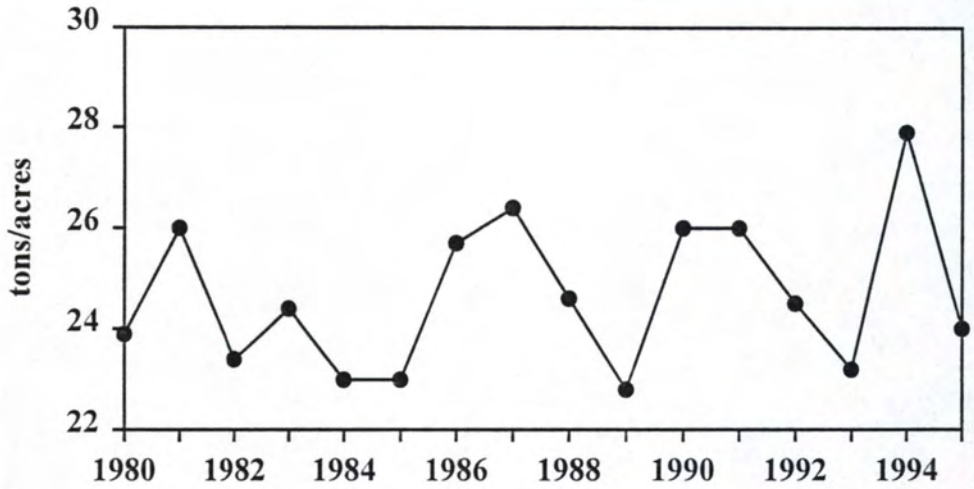
All of the above risk factors would exist whether or not the company is purchased. The only added risk is the $400 investment per acre. If the company is not purchased there are risks involved with sale of the company to someone else and the unknown factors associated with this possibility.

Conclusions

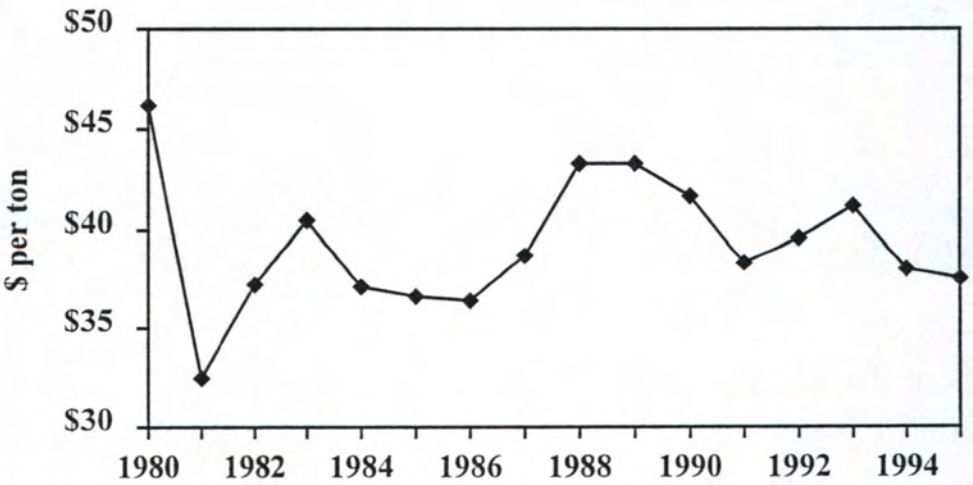
Sugarbeets have been grown in Idaho for nearly a century and have been a good rotation crop for the irrigated areas. Sugarbeet prices have been quite stable, largely because of government programs managing the supply of sugar and insulating the price from the volatile world market. The present farm act will expire in 2002. It is not known if sugar will be supported after that date. The emphasis in world trade is toward a more free market. Then the emphasis will be on sugar production in the most competitive locations. It has been difficult to analyze competitiveness of the Idaho sugar industry because no one knows what the world price would be under a free market. Whatever the rules after the expiration of the farm act, sugarbeet growers are betting they will be able to compete. In any case, the sugar industry should be secure until 2002. Owning the processing company will allow the growers to benefit from processor earnings and to have more control over the industry in Idaho. It also increases the risk borne by the growers. However, as the old saying goes, "no risk, no profit."



IDAHO SUGARBEETS
Yields 1980-1995



IDAHO SUGARBEETS
Price 1980-1995



The 1996 Farm Bill and Price Risk Implications

Paul E. Patterson

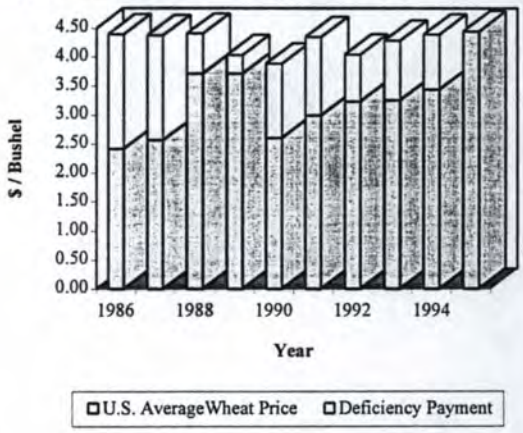
The one word that I would use to characterize the 1996 Farm Bill is *change*. The Federal Agricultural Improvement and Reform (FAIR) Act is a significant departure from a farm policy that has its roots in the 1930's. Rather than discuss the basic parameters of the program, which are fairly straightforward, I want to focus on the consequences and implications to producers.

Consequence of the 1996 FAIR Act

Change brings about both risk and opportunity. The opportunity provided by the new farm bill is increased planting flexibility for producers. Basically, it allows them to respond to the market without the constraints imposed by previous farm programs. The cost to the grower of having increased planting flexibility is the removal of the income safety net provided by past programs. The net is not being dropped immediately, but is being lowered over the seven years of the transitional program. The removal of the income safety net and elimination of supply management will mean greater price volatility, which means greater price and income risk.

Figure 1 illustrates the type of income protection provided to wheat growers by recent farm programs which used deficiency payments to provide income protection when cash price was low. The lower part of the bars show seasonal average U.S. wheat prices over the past ten years. The top portion of the bars shows deficiency payments. When cash price was low, the deficiency payment was high, and when cash price was high, the deficiency payment was low. The deficiency payment served as a buffer and helped reduce revenue or income variability. At the same time, set-aside program provisions attempted to adjust supplies by idling acres when high stock levels depressed prices.

Figure 1. U.S. average wheat price and deficiency payments.



A statistical measure of the variability in a data series is the standard deviation. This measures variability around the mean (average). The higher the standard deviation, the greater the variability. The standard deviation for seasonal average U.S. cash prices over the past ten years is $.63 per bushel. After adding deficiency payments to the cash prices, the standard deviation dropped to $.20. Since income was a combination of the cash price and deficiency payments, the deficiency payments helped reduce income variability for wheat growers. A similar effect occurred for feed grains.

Figure 2 shows white wheat cash prices at Portland for the past ten years. The bars show the seasonal average prices and the line shows the range in prices for that year, another measure of price variability. The standard deviation for cash prices at Portland was $.71 per bushel over the past ten years. This is greater than the standard deviation of average U.S. wheat prices and significantly greater than the standard deviation of revenue per bushel using both the cash price and the deficiency payment. My point is that without deficiency payments the net price received will be more volatile, and therefore income risk for wheat producers will increase under the new farm bill.

Figure 2. Portland #1 soft white wheat prices.

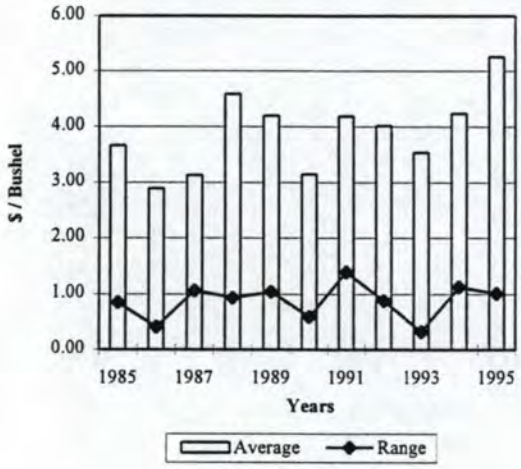
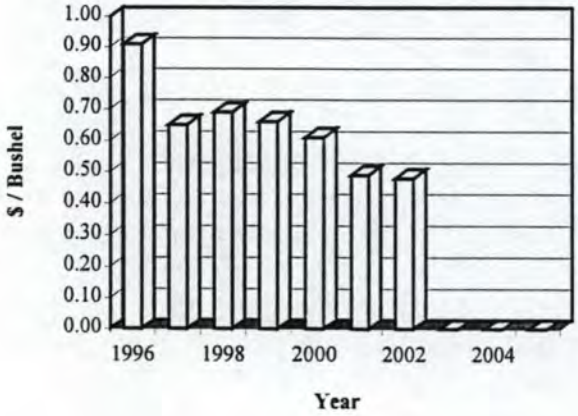


Figure 3 shows the estimated market transition payments for wheat. The pool of funds for these payments are fixed for each year, so the actual payment per bushel received by producers will vary since it depends on the level of grower participation. A guaranteed market transition payment will certainly help protect income. Unfortunately, the highest transition payments will occur when the cash markets are or are expected to be strong, basically 1996 through 1998. The question is what will the cash markets look like after 2002? We could have $5 wheat or we could have $3 wheat.

Figure 3. Estimated wheat transition payment per bushel.



Price Risk Management Strategies

Given that the government is reducing efforts to stabilize farm income, what can or should growers do to help manage their own destiny? Basically, they need strategies to help them manage risk. Risk cannot be eliminated without leaving farming, but it can be managed.

There are a number of things that growers should consider. Many of these are things that growers already do. First, growers should follow a crop rotation that helps produce high quality crops. In a competitive market, quality will become more important and will help insure access to a market even if the price is not as high as growers would like to see. Adding more crops, diversification can also help manage income risk, if prices for the different commodities are not perfectly correlated. Adding livestock to a crop operation may be something to consider, although with cattle prices at their current levels it certainly wouldn't help cash flow in the short term.

Growers may want to make greater use of contracts. Pre-season forward price contracts are generally available in all areas and basis contracts are becoming more common. However, locking into a contract to reduce price risk will increase production risk if yields are less than anticipated. Production risk management, therefore, becomes an important part of establish and effective price risk management strategy.

Crop insurance should be considered. Several new products that combine price and yield protection are being developed. The Income Protection and Crop Revenue Coverage policies have proven very popular in pilot tests.

Hedging, using either a futures contract or an option contract, may work for some producers. But a thorough understanding of the futures market is a prerequisite.

Making sales at several times during the year will also help reduce income variability. This is the

same concept used by stock market investors who purchase periodically over time. Investors call this *average cost investing*. It is difficult to hit the high in a market, and it is virtually impossible to do it consistently. But selling at several times throughout the year will insure avoidance of selling everything at the low point of a market.

Growers should also make greater use of market outlook information. They should not only be concerned with what is occurring in this country, but also with the situations in other major importing and exporting countries. We are in a global market. Market outlook will help producers analyze price trends and should help them determine when or when not to sell.

Farmer Response to Change

In responding to change, growers need to continue pursuing educational opportunities. Community colleges, commodity exchanges and the Cooperative Extension System offer workshops and seminars on marketing, market outlook and other topics useful to managing risk. Resource materials, both written and in video format, are available in many extension offices. A formally organized producer marketing club is another alternative to consider.

Increasing production efficiency has kept many producers in business as input costs increased faster than commodity prices. Growers will need to continue to work at keeping their production costs low.

Growers have to maintain greater flexibility in their operations, both on the production side and the financial side. Growers will need abilities to react quickly to changing market situations. Evaluating alternative crops on an experimental but on-going basis may make a lot of sense. Producers should gain necessary knowledge on a small scale before trying to make large scale changes. The amount and the type of debt that producers carry is critical to their financial flexibility. Producers with a low total debt to asset ratio (low leverage) face less financial risk when revenue falls because of low prices or low yields than producers that are highly leveraged. Smart debt increases the farms productivity and earns a rate of return that exceeds the interest charged to borrow the money. Leasing rather than purchasing specialized but expensive equipment may help provide greater financial flexibility and reduces the risk of technological obsolescence.

Regardless of how growers respond to increased opportunities and risk, they need to have plans. Developing a farm plan or business plan is a key component in helping manage for change. Change and uncertainty are the reasons to plan, not the reasons to avoid planning. Producers need to start by defining their goals and objectives, both business and personal. They need to inventory their physical and financial resources, and use this information in developing both a production plan and an integrated marketing plan. Risk management should be an integrated component of each plan, not a separate plan. Planning is the key for a successful manager.

The Nature of Changes

Not all the changes stemming from the 1996 Farm Bill will occur immediately. Initially, the changes in most areas will be minor. But as time goes on, the potential impacts will increase. The impacts will not be uniform within the country, nor within a region of the country. There will be winners and losers with comparative advantage and competitive advantage determining the final outcome. It's not how much you can produce or even how cheaply you can produce it, but can you compete economically with producers in other parts of the U.S. and with producers in other countries?

Land values will change, both positively and negatively and some land will likely be removed from production. The areas of the Midwest, Great Plains and the South will likely see the biggest changes.

Producers also need to consider the interaction that farm program changes have with other recent or proposed policy changes in trade, fiscal policy and

monetary policy. One of the most significant reasons for the change in farm policy was the desire to balance the federal budget, a fiscal policy issue. The spending levels set for the next seven years under the 1996 Farm Bill were also driven from budget considerations. Trade barrier reductions in NAFTA and GATT are redefining what countries can and cannot do in their domestic food and agricultural policies.

Management

Management has been defined as the "art of making good decisions based on inadequate information." Producers are first and foremost managers. That will not change. The rules under which they make their decisions, however, are changing. Managing for change will be just another condition in the decision-making process used by producers. Growers, as they have in the past, will make important management decisions with incomplete and sometimes contradictory information. But that is the nature of farm management.

Agriculture and Community Services: The Cases of Canyon and Cassia Counties

Martha Hartmans and Neil Meyer

As citizens of Idaho and their legislative representatives continue discussions of financing local and state government, consideration of the current revenue contribution and service demands of different classes of property can be helpful.

A recently completed Cost of Community Services (COCS) study for Canyon and Cassia Counties revealed that residential property receives services valued in excess of $1.00 for every $1.00 in revenue collected from residential property. Canyon County residential property receives an average of $1.07 in services while residential property in Cassia County receives an average of $1.19 in services for every $1.00 in revenue. Since commercial/industrial and agricultural property in both counties receive less than $1.00 in services for every $1.00 in revenue collected, revenue from these property exposures subsidize services to the residential land use exposure.

One of the responsibilities of governments at all levels is to provide certain types of services (public safety, public works, education, roads, etc.) to the population in the area served. Governments obtain revenue through taxation and from other sources (service fees, state revenue sharing and federal aid) to pay for services provided. Property taxes are a major source of revenue used by Idaho community and county governments to provide the services that their constituent populations require.

Taxes on real property–land and improvements–contribute a considerable amount of the revenue used to fund government services at the local level. Real property is broken down into three broad categories or "exposures" based on the primary use of the land being taxed. These exposures are residential, commercial/industrial and agricultural. The taxable value of real property (and the taxes levied on it) depends on how the property is used. The exposure also affects the amount and type of government services that are required. For example, residential property generally contributes the most to the local property tax base and generally requires the greatest amount of services. Agricultural property or open space, on the other hand, generally has the lowest taxable value and requires few government-provided services.

A Cost of Community Services (COCS) study shows the relationship between government revenue generated and expenditures incurred for services by each land use exposure. The results, expressed as a ratio of revenue to expenditures (service costs), highlight the cash flows of local governments in providing community services to the public.

A Cost of Community Services study was done for Canyon County and Cassia County, Idaho. The objective was to determine the breakdown of all revenue generated and all expenses incurred by land in each exposure in each county, and to calculate a ratio of expenditures for services to revenue provided by each land use exposure.

Analysis

For this study, residential property was defined as all land and structures used for residential purposes, regardless of whether that residential property was located in a city, a rural subdivision or as part of a farm. Commercial/industrial property was defined by the county assessor's in each county as property and associated structures devoted to commercial or industrial purposes. Agricultural property was defined as property and improvements used for the production of crops and livestock and did not include any residential structures.

Revenue and expenditure data for the fiscal year ending September 30, 1995, were collected for the two counties and for each incorporated town within the county. Additionally, since independent taxing districts indicate the local population's demands for services unavailable from county or city government,

revenue and expenditure data were also collected for the independent taxing districts within each county.

The 1994 Real, Personal, and Manufactured Housing (Property) Rolls for each county listed the number of parcels or acres of each type of property in the county, as well as the net taxable value of that property. The combined net taxable value for property in each land use exposure was used to calculate the proportion by value of property in each exposure in each county. The combined acreage or parcel count was used to calculate the proportion by physical presence, of each property exposure in each county. These proportions were then used to estimate revenue from various sources attributable to each land use exposure and to allocate the expenditures made by governments to property in each exposure. The proportion and value of land in each exposure, as well as the number of parcels or accounts of each type of property in Canyon and Cassia counties are listed in Table 1. This proportional breakdown was also done for each city and taxing district in both counties.

Revenue was allocated, if possible, directly to the exposure from which the revenue was received. For example, revenue from business licenses and franchise fees was allocated to the commercial exposure. Fines and forfeitures were generally allocated to the residential exposure, as was state and federal revenue sharing funds that were dependent on population. Where the revenue source could not be specifically allocated to a particular exposure, that revenue (such as property taxes and miscellaneous) was allocated according to each exposure's proportion of total taxable value in each county.

Expenditures were allocated to the exposure that would receive the greatest use or benefit from the service. For example, where services such as schools, cemeteries, and libraries were provided that benefit the population, those expenditures were allocated to the residential exposure. Where services were provided to protect the property in the taxing district, such as flood control, fire protection, etc., that expenditure was allocated according the proportion of taxable value of each land use exposure. Where services were made on a geographic basis, such as expenditures for streets and highways, those expenditures were allocated according to the physical proportion of each property exposure in the county.

Expenditures and revenue for each county, city, and independent taxing district were allocated according to land use as described above. Total expenditures were then divided by total revenue for each exposure to obtain a ratio of services to revenue. These ratios were computed for each county, for cities within the counties, for independent taxing districts, and for all taxing entities within the counties.

Table 1. Breakdown of real property in Canyon and Cassia Counties by taxable value and by parcel count.

	----------$ Net Taxable Value----------			-----Percentage of County-----		
	Residential	Commercial	Agricultural	Res	Comm	Ag
CANYON COUNTY IDAHO						
Value	$1,555,941,362	$1,049,013,826	$207,241,947	55.3	37.3	7.4
Parcels[a]	36237	3050	16509	64.9	5.5	29.6
CASSIA COUNTY IDAHO						
Value	$109,927,316	$47,720,027	$147,979,346	36.0	15.6	48.4
Parcels[b]	4234	544	5088	42.9	5.5	51.6

[a] The Canyon County Assessor's office uses "accounts" to track the parcels of property in each land use classification.
[b] Cassia County Assessor's office keeps track of the number of parcels of property in each land use classification.

Results

Canyon County

Canyon County taxing entities included the county government, eight incorporated cities, and fifty-six independent taxing districts. The total expenditures and revenue by exposure and the ratio of expenditures to revenue for Canyon County and other taxing entities within the county are reported in Table 2.

Ratios of expenditures to revenue indicate the amount of services received by land in each land use exposure for every dollar of revenue collected, from all sources, by each taxing entity. Residential property received $1.43 in services from the county government for every $1.00 of revenue collected. Commercial and agricultural property in Canyon County received $0.65 and $0.62 worth of county services per $1.00 revenue, respectively. Residential property included in the tax base of all incorporated cities in Canyon County received an average $1.03 in city-provided services for every $1.00 in revenue collected, while commercial and agricultural property received an average $0.84 and $0.26 respectively, in city-provided services for every $1.00 in revenue.

Most independent taxing districts provide city-type services to residential populations living outside the boundaries of incorporated cities, or provide extra funding for services when local populations outgrow the level of service expenditures made by city or county governments. Independent taxing districts reflect the population's demand for services that are unavailable or underfunded by county or city government entities. Canyon County had 56 independent taxing districts providing organized levels of government services to county residents. On average, residential property received $1.02 of services from independent taxing districts for every $1.00 in total revenue collected. Commercial and agricultural property received $0.83 and $0.49, respectively, in taxing district services for each $1.00 in revenue. County-wide, residential property received $1.07 in services from all taxing entities for each dollar in revenue collected. Commercial property received $0.78 in services per $1.00 revenue from all taxing entities while agricultural property received only $0.54 in services for each dollar in revenue collected by all taxing entities within the county.

Table 2. Comparison of revenue to expenditures for Canyon County taxing entities.

CANYON COUNTY	Residential	Commercial	Agricultural
County Expenditures	18,963,253	5,215,305	980,377
County Revenue	13,299,014	8,008,113	1,586,536
RATIO	1.43	0.65	0.62
City Expenditures	27,775,521	11,220,575	829
City Revenue	27,005,891	13,433,357	3,187
RATIO	1.03	0.84	0.26
Tax District Expenditures	87,085,048	7,059,160	1,404,259
Tax District Revenue	85,127,399	8,458,956	2,851,267
RATIO	1.02	0.83	0.49
Total County Expenditures	133,823,822	23,495,040	2,385,465
Total County Revenue	125,432,304	29,900,426	4,440,990
RATIO	1.07	0.78	0.54

Cassia County

Cassia County taxing entities included county government, five incorporated cities, and twenty-six independent taxing districts. The total expenditures and revenue by exposure and the ratio of expenditures to revenue for Cassia County and other taxing entities within the county are reported in Table 3.

In Cassia County, property in the residential exposure received $1.40 in county services for every $1.00 in revenue contributed by the exposure. Commercial and agricultural property received $0.97 and $0.45 in county services, respectively, for every $1.00 in revenue each provides to the county. For residential property included in the tax base for incorporated cities in Cassia County, $1.02 in city services were provided for each $1.00 in revenue contribution. Commercial property included in the city tax base in Cassia County received $0.97 in city services for each $1.00 in revenue collected. Agricultural property in the city tax base received only $0.25 in services for every $1.00 contribution to revenue. Residential property received $1.21 in services from independent taxing districts for every $1.00 in revenue contributed to the taxing districts. Commercial property received $0.73 in tax district services for every $1.00 worth of revenue contributed, while agricultural property received only $0.38 in services for each $1.00 in revenue attributable to the agricultural exposure. For all taxing entities within Cassia County, residential property received $1.19 in services, commercial property received $0.87 in services, and agricultural property received $0.41 in services for each $1.00 contributed to all revenue.

Table 3. Comparison of revenue to expenditures for Cassia County taxing entities.

CASSIA COUNTY	Residential	Commercial	Agricultural
County Expenditures	7,989,583	1,316,366	1,652,670
County Revenue	5,686,786	1,360,015	3,685,217
RATIO	1.40	0.97	0.45
Total City Expenditures	8,937,920	2,039,942	5,670
Total City Revenue	8,765,829	2,094,021	22,243
RATIO	1.02	0.97	0.25
Tax District Expenditures	19,873,400	1,687,427	1,855,891
Tax District Revenue	16,467,208	2,318,224	4,948,364
RATIO	1.21	0.73	0.38
Total County Expenditures	36,800,903	5,043,735	3,514,231
Total County Revenue	30,919,823	5,772,260	8,655,824
RATIO	1.19	0.87	0.41

Summary

The above analysis describes the dollar value of services received from each taxing entity for every dollar in revenue (from all sources) attributable to each land use exposure. As the analysis shows, residential property in both counties received more than a dollar's worth of services for each dollar in revenue collected from that exposure. Commercial and agricultural property in both counties received considerably less value of services than the revenue paid for those services. This indicates that a portion of the revenue from commercial and agricultural property are going to subsidize services received by the residential exposure in both counties.

The residential exposure in Canyon County received an average of $1.07 in community services for every $1.00 in revenue collected. In Cassia County, the residential exposure received $1.19 in services for every $1.00 in revenue. Commercial property in Cassia County received $0.87 in services on the revenue dollar, while commercial property in Canyon county received back only $0.78 in services. The portion of revenue from the commercial exposure subsidizing the residential exposure was relatively less in Cassia County than in Canyon County. Agricultural property in both counties provided the bulk of the subsidy to residential property. Since agricultural property in Canyon County received back only $0.54 in county-wide services for every revenue dollar collected, approximately $0.46 of every dollar in revenue went to subsidize property in another exposure. In Cassia County, the subsidy from the agricultural exposure was considerably higher, with $0.59 of every revenue dollar going to subsidize other exposures.

In conclusion, residential property received a higher proportion of community services than are paid for by revenue collected by taxing entities from residential property. The "extra" value in community services was subsidized by property in other exposures. The majority of the subsidy came from revenue collected from agricultural property.

Late Blight in Idaho in 1995 and 1996

Phillip Nolte

When late blight of potato descended upon Ireland some 150 years ago in 1845, it was the cause of a calamity–the infamous Irish Potato Famine. The famine was ultimately responsible for the deaths of over 1 million people and led to the further emigration of 1.5 to 2 million to the US and Canada. The population of Ireland at the time the famine hit was estimated to be somewhere around 7 to 8 million. The famine cut this number in half. Ironically, 8 million is about what the population of the Island is today; it has taken the past 150 years for the population to recover.

The Irish famine also marked a very important time for the science of Plant Pathology. When the blight descended upon Ireland in 1845, the scientific world was still in heated debate over the role that microscopic organisms, like fungi, played in plant disease. Were they the actual cause of plant disease or were they simply present because they were taking advantage of a plant weakened by a disease caused by some other means? Efforts to understand this fundamental relationship between the potato and the late blight fungus led directly to the birth of the science of Plant Pathology and paved the way for the later formulation of the germ theory of disease in man and animals. This era of discovery marked a dramatic turning point in man's ability to make sense out of the world around him.

In the early 1990's, some new strains of late blight began to appear in the eastern United States. These new variants were not only resistant to one of the most effective late blight fungicides known (metalaxyl), but also appeared to be more aggressive than the old strains were. Since those first findings just a few years ago, the new strains have all but replaced the old ones all across the United States and Canada and have very likely allowed late blight to become established in potato production areas where the disease has traditionally not done very well. In 1995 one of the new strains was detected in Idaho.

The first report of late blight in Idaho in 1995 was on July 5 from a field near Parma. Disease spread, following the familiar late blight pattern with one field reported the first day, a handful more over the next several days until after about two weeks there was no need to count anymore. Virtually every field had some detectable level of blight. Immediate action by all factions of the potato industry in western Idaho was able to head off disaster for all but a few growers in the region. Overall, we estimate that about 25,000 acres were affected to some extent in this area.

One disturbing characteristic of late blight is its ability to infect, not only the foliage, but also the tubers of the potato plant. Tuber infection can be responsible for serious storage problems as well as providing a source of the fungus for disease to start in the next season's crop in infected cull potatoes or volunteers. The widespread occurrence of blight in the western region probably provided a critical mass of fungal spores that enabled the disease to move to the east.

Central Idaho wasn't hit until August 29. This was at a point in time when many growers just needed another week or two in the growing season to bulk up their crop a little more. The same pattern of spread was observed with a few positive fields early and disease progress so rapid that many fields were reported within the next week or so. The disease was fairly well contained in central Idaho with foliar damage remaining relatively minor in most fields, but a number of growers reported tuber blight infections that caused storage problems later in the season. Unfortunately with late blight, only a small amount of foliar infection can often lead to very serious tuber infections. At final tally, this area also had around 25,000 acres affected.

The final chapter in the 1995 late blight story was written when a seed potato production greenhouse near St. Anthony was hit on September 20. It

seems that virtually none of the Idaho potato production regions escaped exposure to this disease, although no positive samples were found in any fields east of the Raft River area.

In 1996 the pattern was totally different. The first report of disease was not until August 7 and this was not from the western region but from central Idaho, near Burley. Disease progress was much slower than in 1995 but, by the end of the season, there were 30 fields with confirmed late blight in the Magic Valley. In sharp contrast to the 1995 season, western Idaho remained blight free until almost the very end of the season when there were two positive fields reported near Parma. This different pattern of spread was not totally unexpected because there was more than enough reason to believe that the fungus had been able to overwinter in the Magic Valley and would not have to rely on fungal spores from western Idaho to initiate the disease as in the previous year. However, many people thought that western Idaho with their earlier maturing crop and their considerable problems early in the previous season would be the more likely of the two areas for blight to start.

There are several possible reasons why disease spread followed a different pattern in 1996. Probably the most important of these concerns the weather. Even the new strains of late blight are highly dependent on cool, wet conditions for disease development and subsequent spread. Sprinkler irrigation, especially if it is mismanaged, can provide adequate conditions for disease to develop within a field, but we believe that rainfall–which means excess moisture and high relative humidity over large areas–is important for spread from field to field and from region to region. One thing that probably worked in favor of the potato industry was that the 1996 season was considerably drier than the previous season. In addition, growers in the western region applied fungicides early and often in an effort to prevent disease establishment.

For the future we may have to resign ourselves to the fact that Idaho has now become a "late blight state" just like so many others and that late blight management will have to become a necessary part of the planning process for producing a crop from year to year. Some success has been enjoyed in other production areas using weather data to "model" conditions favorable for late blight development and spread, thus allowing the prediction of disease outbreaks which can be headed off with preventative fungicidal spray programs.

We are currently examining weather information for both of Idaho's blight years in all affected areas to see if this sort of prediction modeling is possible in a state with a desert climate that relies on sprinkler irrigation to produce a crop. It is safe to say that the book on late blight management in Idaho is currently being written.

1996-97 Planning Prices for Idaho Crops and Livestock

Paul E. Patterson, C. Wilson Gray and Neil R. Rimbey

Commodity prices vary significantly, not only between years, but within the marketing year as well. In general, prices are lowest at harvest and strengthen as the temporary imbalance of supply and demand changes. While some commodities follow well established seasonal price patterns, others are quite erratic and vary significantly from year-to-year. Even for commodities with well established seasonal patterns, the overall price level can be dramatically different even though the pattern may remain unchanged. Representing an entire marketing year with a single price, even one based on historical data, can be very misleading if the variability is not understood. Often, however, a single price must be used for planning purposes.

Because one planning price will not fit all situations, both a long-range and short-range planning price are listed (Tables 1-3). The long-range planning prices are based on time-series data, when an acceptable data series is available. There are two price columns for the crop planning prices, one showing the 10-year Olympic average and the second showing the lowest average price over the past ten years. The prices are based on a marketing year, rather than a calendar year. The marketing year varies by commodity and matches those established by USDA, generally from harvest to harvest.

The short-run planning prices are expected prices for the 1996/97 marketing year, based upon current market fundamentals, supply, demand, stocks and expected utilization. They represent an estimate of what the price is expected to average over the current marketing year. To address the issue of risk, the lowest expected price of the current market year is also listed.

Olympic Averages

An Olympic average is calculated by removing the high and the low price from the specified time frame and averaging the remaining values. This is the same procedure used in scoring many events during the Olympics, hence the name. An Olympic average will tend to show less variability over time than a simple average for the same period because the impact of one year's extremely high or low price is reduced.

Short- Vs. Long-Run

Which price to use, long-run or short-run, depends on the analysis. A feasibility study would use the long-range planning prices, while a cash flow estimate for the current year might rely on the short-run planning price.

What price should be used on 1997 crops that will be marketed in the 1997/98 marketing year? An average of the long- and short-run planning prices is one alternative. Since prices tend to move toward the historical average, the price received for the 1997 crop will tend to be between the short-run and long-run prices, assuming the short-run prices are accurate. A more conservative approach is to use the long-run planning price for any crop but the current one. This second method is preferred when the short-range planning price varies significantly for the long-range planning price, a situation that currently exists for potatoes.

Data Sources and Data Problems

The information used to calculate these planning prices comes from a variety of different sources, although the Idaho Agricultural Statistics Service, USDA is the dominant source. Unfortunately, USDA does not acquire price data on all crops grown in the state. Obtaining price information for crops grown predominately or exclusively under contract can be a particularly difficult problem. Another problem occurs when the USDA commodity data is not market class specific. For example, the wheat price published by the Idaho Agricultural Statistics

Service is differentiated as winter and spring. But, there are significant differences between the price of hard red spring wheat and soft white spring wheat, and between hard red winter and soft white winter wheat.

Grain prices are based on the Idaho Farm Bureau prices at Pocatello for feed barley, hard red spring wheat (14%), hard red winter wheat (11%) and soft white wheat. The price in other areas of Idaho is adjusted to account for differences in the transportation cost from Pocatello to the terminal market, normally Portland, based on the historical price difference measured from Pocatello. While this price difference has changed over time, it tends to remain fairly stable within a given year. The market location for Southcentral Idaho is the Burley/Twin Falls area, the market location for Southwestern Idaho is the Nampa/Caldwell area, and the market location for Northern Idaho is Lewiston.

The prices for corn and oats are based on USDA data. Contract malt barley is based on the prevailing base price from the most recent contracts. Open malt barley is priced $1.00 above the feed barley price. While the malt barley premium varies year-to-year, the $1 per cwt represents a long-term difference. Up until five years ago, USDA reported only one barley price in Idaho. This was a composite of the monthly average of feed barley, open malt barley and contract malt barley purchases. While USDA still maintains the all barley price, it also has a feed barley price series and a malt barley price series. The new data series don't currently contain an adequate historical base needed to look at long-term trends. Also, the malt barley price includes both open market and contract purchases made during a given month.

The price for dry beans, dry peas and lentils use monthly prices from Ag Market News, USDA. The price for rapeseed is based on the posted county price from the ASCS. Prices reported by USDA are also used on sugarbeets, sweet corn and the fresh and processing potatoes. The contract potato price uses the current or most recent base contract price adjusted for the five year quality average.
Hay, straw and corn silage prices come from a variety of different sources, including hay brokers, county agents and livestock producers. The AUM rate is split between what is charged by the federal land management agencies, BLM and Forest Service, and what is charged on private pasture. The short-range government AUM price is $1.35. This assumes that Congress and the Secretaries of Interior and Agriculture will not resolve the continuing fight over grazing fees in 1997. The PRIA fee formula that is in place includes a $1.35 floor price. With the decline in the cattle markets and continuing inflation of production inputs, it is likely that the floor will be reached under the PRIA formula in 1997. The long-range government AUM price is based upon expected increases brought about through the on-going political process. Private pasture rates are expected to maintain traditional levels in the short run. Long-term pasture rents are expected to increase, given the uncertainties surrounding federal land livestock grazing.

Livestock Price Estimates

The short-range planning prices are conservative estimates based on the present market fundamentals. Long-range price estimates are based on historical price trends over the last 10 years. While livestock prices are statewide estimates they are most reflective of Southern Idaho.

Comments

The commodity price outlook is presented as a guideline to assist farmers, ranchers, lenders and agribusinesses in planning. Local circumstances may alter the actual prices in your area.

It will enhance your planning efforts if you keep updated on the current outlook situation. Use current information to modify your plans as necessary. Some sources for current outlook are:

- The Idaho Agricultural Situation and Outlook published in December. Contact your local University of Idaho Extension office for a copy.
- The *Western Livestock Roundup* published in the Western Beef Producer.
- USDA's World Agricultural Supply and Demand Estimates (WASDE) is published monthly. It includes U.S. and world situation/outlook commentary and information on meats, dairy, grains and other major crops. Call 1-800-999-6779 for more information.

For those with access to the Internet, reports published by the Economic Research Service, the World Agriculture Outlook Board, and the National Agricultural Statistics Service, all part of USDA, are available at the following URL:

http://usda/mannlib.cornell.eud/usda/usda.html

Table 1. 1996/97 long-range crop planning prices for Idaho based on marketing year averages.

Crop	Units	Southwestern		Southcentral		Southeastern		Northern	
		7-yr Olympic Average	7-yr Average Low	7-yr Olympic Average	7-yr Average Low	7-yr Olympic Average	7-yr Average Low	7-yr Olympic Average	7-yr Average Low
Barley, Feed	cwt	$ 4.85	$ 3.85	$ 4.80	$ 3.80	$ 4.60	$ 3.60	$ 4.80	$ 3.80
Barley, Malt:									
Open	cwt	---	---	$ 5.80	$ 4.80	$ 5.60	$ 4.60	$ 5.80	$ 4.80
Contract	cwt	---	---	$ 6.25	---	$ 6.25	---	---	---
Corn	bu	$ 2.80	$ 1.95	$ 2.75	$ 1.95	---	---	---	---
Oats	cwt	$ 4.10	$ 3.50	$ 3.90	$ 3.40	$ 4.00	$ 3.30	$ 4.15	$ 3.55
Wheat:									
Hard Red Spring	bu	$ 3.95	$ 2.85	$ 3.80	$ 2.70	$ 3.85	$ 2.75	---	---
Hard Red Winter	bu	$ 3.45	$ 2.45	$ 3.30	$ 2.30	$ 3.35	$ 2.35	---	---
Soft White	bu	$ 3.35	$ 2.45	$ 3.20	$ 2.30	$ 3.25	$ 2.35	$ 3.55	$ 2.65
Alfalfa Seed :									
Proprietary	lb	$1.10	na	$1.10	na	---	---	---	---
Public	lb	$1.00	na	$1.00	na	---	---	---	---
Dry Beans	cwt	$19.80	$14.50	$19.80	$14.50	---	---	---	---
Dry Peas:									
Austrian Winter	cwt	---	---	---	---	---	---	$10.95	$ 7.35
Green	cwt	---	---	---	---	---	---	$ 8.70	$ 7.30
Seed (contract)	cwt	---	---	$13.20	$10.60	$13.20	$10.60	---	---
Lentils	cwt	---	---	---	---	---	---	$16.65	$11.00
Rapeseed	cwt	---	---	---	---	$ 8.60	na	$ 8.80	na
Potatoes:									
Contract	cwt	$ 5.05	$ 5.00	$ 5.05	$ 5.00	$ 5.05	$ 5.00	---	---
Fresh - open	cwt	$ 4.90	$ 3.00	$ 4.90	$ 3.00	$ 4.90	$ 3.00	---	---
Process. - open	cwt	$ 4.95	$ 3.80	$ 4.95	$ 3.80	$ 4.95	$ 3.80	---	---
Seed - G3	cwt	---	---	---	---	$ 6.50	$ 4.25	---	---
Seed - G4	cwt	---	---	---	---	$ 6.10	$ 4.00	---	---
Sugarbeets									
Contract	ton	$39.00	$35.40	$40.00	$36.40	$41.00	$37.40	---	---
Sweet Corn									
Contract	ton	$59.60	$53.40	$59.60	$53.40	---	---	---	---
Alfalfa Hay:									
Feeder	ton	$65.00	na	$65.00	na	$65.00	na	$70.00	na
Dairy	ton	$80.00	na	$80.00	na	$80.00	na		na
Grass Hay	ton	$55.00	na	$55.00	na	$55.00	na	$55.00	na
Corn Silage	ton	$25.00	na	$25.00	na	$25.00	na	---	---
Straw	ton	$25.00	na	$25.00	na	$25.00	na	---	---
Pasture (irrigated)	AUM	$14.00	na	$14.00	na	$14.00	na	---	---
Range (govt.)	AUM	$2.75	na	$2.75	na	$2.75	na	$2.75	na

Prices are for crops sold on the open market, unless otherwise specified; i.e. contract.

Table 2. 1996/97 short-range planning prices for Idaho based on expected marketing year averages.

		Southwestern		Southcentral		Southeastern		Northern	
Crop	Units	Expected Market Average	Expected Market Low	Expected Market Average	Expected Market Low	Expected Market Average	Expected Market Low	Expected Market Average	Expected Market Low
Barley, Feed	cwt	$ 5.35	$ 5.05	$ 5.30	$ 5.00	$ 5.10	$ 4.80	$ 5.35	$ 5.05
Barley, Malt:									
Open	cwt	—	—	$ 6.20	$ 5.90	$ 6.00	$ 5.70	$ 6.25	$ 5.95
Contract	cwt	—	—	$ 6.25	—	$ 6.25	—	—	—
Corn	bu	$ 3.45	$ 2.95	$ 3.40	$ 2.90	—	—	—	—
Oats	cwt	$ 5.20	—	$ 4.90	—	$ 5.00	—	$ 5.30	—
Wheat:									
Hard Red Spring	bu	$ 4.35	$ 3.90	$ 4.20	$ 3.75	$ 4.25	$ 3.80	—	—
Hard Red Winter	bu	$ 4.10	$ 3.60	$ 3.95	$ 3.45	$ 4.00	$ 3.50	—	—
Soft White	bu	$ 3.85	$ 3.10	$ 3.70	$ 2.95	$ 3.75	$ 3.00	$ 4.05	$ 3.30
Alfalfa Seed:									
Proprietary	lb	$1.15	na	$1.15	na	—	—	—	—
Public	lb	$1.05	na	$1.05	na	—	—	—	—
Dry Beans	cwt	$25.00	$21.00	$25.00	$21.00	—	—	—	—
Dry Peas:									
Austrian Winter	cwt	—	—	—	—	—	—	$12.75	$11.50
Green	cwt	—	—	—	—	—	—	$11.00	$ 9.75
Seed (contract)	cwt	—	—	$13.50	—	$13.50	—	—	—
Lentils	cwt	—	—	—	—	—	—	$19.00	$17.00
Rapeseed	cwt	—	—	—	—	$ 8.50	na	$ 9.00	na
Potatoes:									
Contract	cwt	$ 5.15	—	$ 5.15	—	$ 5.15	—	—	—
Fresh - open	cwt	—	—	$ 3.75	$ 2.25	$ 3.75	$ 2.25	—	—
Process. - open	cwt	$ 4.00	$ 2.75	$ 4.00	$ 2.75	$ 4.00	$ 2.75	—	—
R.B. Seed - G3	cwt	—	—	—	—	$ 6.25	—	—	—
R.B. Seed - G4	cwt	—	—	—	—	$ 6.00	—	—	—
Sugarbeets									
Contract	ton	$40.00	—	$41.00	—	$42.00	—	—	—
Sweet Corn									
Contract	ton	$60.00	—	$60.00	—	—	—	—	—
Alfalfa Hay:									
Feeder	ton	$75	—	$75	—	$70	—	$85	—
Dairy	ton	$95	—	$95	—	$95	—		na
Grass Hay	ton	$65	—	$65	—	$60	—	$65	na
Corn Silage	ton	$30	—	$30	—	$30	—	—	—
Straw	ton	$35	—	$35	—	$35	—	—	—
Pasture (irrigated)	AUM	$12.50	na	$12.50	na	$12.50	na	—	—
Range (govt.)	AUM	$1.35	na	$1.35	na	$1.35	na	$1.35	na

Prices are for crops sold on the open market, unless otherwise specified; i.e. contract.

Table 3. Historic one year and long-range planning prices for PNW livestock based on calendar year averages.

	Unit	Annual Average				1997 Quarterly				
		1994	1995	1996-p	1997-f	I-f	II-f	III-f	IV-f	Long Term Ave.
Ch. Steers 11 - 1300# *	cwt	68.84	66.24	64.50	68	65-71	67-73	64-69	66-72	68
Steers 8-900# *	cwt				68	65-71	67-73	64-69	66-72	68
Steers 7-800# *	cwt	77.72	68.03	60.50	69	63-67	67-74	64-70	66-74	69
Steers 6-700# *	cwt				71	66-74	69-75	65-72	68-76	69
Steers 5-600# *	cwt				72	64-70	67-75	67-73	70-77	72
Steers 4-500# *	cwt				72.50	69-76	70-76	68-74	72-78	74
Utility Cows **	cwt	42.51	35.58	31.50	32	25-30	29-33	28-35	28-35	35
Market Hogs 240# average	cwt	38.70	38.30	51.50	51	49-53	51-56	48-55	44-49	44
Slaughter Lambs (100-125#)	cwt	62.90	74.80	84	80	78-86	85-83	83-93	77-84	65
Feeder Lambs (65-99#)	cwt				88	81-90	90-98	85-95	80-87	70
Cull Ewes	Head	27.70	26.10	27	27	24-28	25-30	24-29	22-26	18
Wool (Grease basis)	lb.	0.68	0.88	0.90	0.90					0.60
Milk, Class I	cwt	12.40	12.20	14.90	13.45	13.50-15.00	13.00-14.25	12.25-13.50	12.25-13.75	12.00
Milk, Class III	cwt	11.88	12.05	14.30	13.20	13.30-14.80	12.75-13.45	12.00-13.50	12.00-13.50	11.50

p = preliminary
f = forecast
* heifers will be 6 to 10 cents under steers in the same wt. class.
** bulls will be 4 to 6 cents over utility cows.

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