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**FINANCIAL PROSPECTS, BUSINESS ORGANIZATION, AND MANAGEMENT:
FARM BUSINESS CHALLENGES**

by

Jim Ryan, Dave Peacock, and Janet Perry

When we reviewed the farm financial situation at last year's Outlook Forum, we described a U.S. farm economy facing an encouraging future of greater access to an expanding global marketplace, facilitated by a new era of federal farm policy under the 1996 Federal Agriculture Improvement and Reform Act (the 1996 Farm Act). We described an evolving domestic and global agricultural policy era that would allow U.S. farmers additional freedom in making production decisions, and a global market that would present fewer trade barriers and enhanced opportunities to market that product. While increasing farmers' exposure to the risk inherent with greater market orientation, the approach has been advantageous for U.S. farmers over the past two years, as a robust domestic economy and strong export demand for our farm products has produced favorable farm prices and incomes.

Entering 1998, farmers are becoming increasingly aware of the added risk that accompanies greater market freedom. While events of the last few months have not dampened our expectation for a profitable, competitive U.S. farm economy, they have served notice that the road to farm sector prosperity will not be a straight line path of unbroken successes. Uncertainty in Asian financial markets and the slowing of economic growth in some of our trading partners have reduced demand for our farm products, while an excellent 1998 growing season in Argentina and Brazil has added to anticipated global supplies, and a strengthening dollar has made our goods more expensive relative to those from competing producers.

The purpose of this presentation is to report on the financial performance of the farm economy in the recent past, and to discuss its likely future performance, in light of the structural changes, organizational and financial, that are most likely to influence both the level and the distribution of farm sector income in the coming years.

Farm Income Outlook for 1998

A market-oriented farm policy presents added risks not only to farmers producing agricultural commodities, but also to those who would forecast the income of those farmers. We recently reported, both in the December 1997 issue of Agricultural Income and Finance: Situation and Outlook Report, and in the January 1998 Agricultural Outlook, that 1998 farm income was expected to rise slightly from 1997 levels, and, while not likely to equal the record set in 1996, farm income prospects for 1997 and 1998 looked quite favorable. The farm income record set in

1996 was the result of good, though not record, production of major field crops and higher than average prices, which remained strong even after harvest. Cash receipts were expected to remain relatively high in 1997 and 1998, though not likely to repeat 1996 levels. Expectations for 1998 are periodically revised, and export and price data available since late fall suggest that cash receipts will be lower than previously estimated. Sales for several commodities, particularly hogs, soybeans, poultry, and wheat, will likely be below previous forecasts.

Net cash income, the return to farm operators from sales and other cash income minus out-of-pocket expenses, is expected to be about \$52 billion in 1998, down from \$55 billion in 1997 (figure 1). While substantially less than the nearly \$60 billion 1996 record, 1998 net cash income will be near the average for 1990-95 (\$53 billion). Net cash income, historically less variable than other farm sector income measures, is the best choice of indicators to gauge the funds available for family living expenses and retirement of debt. Including changes in farm inventories and non-cash income and expenses provides a projected *net farm income* of about \$46.6 billion in 1997 and \$43 billion in 1998. This figure is also slightly above the average for first half of the 1990's (\$43 billion), but substantially lower than the record \$52 billion for 1996.

The 1997 projection for *crop and livestock receipts*, based on production and price observations during the calendar year, is for a modest \$1.5 billion decline from 1996's record of \$202 billion (figure 2). Cash receipts for 1998, given present crop and livestock production and price expectations, are anticipated to decline \$2.3 billion from 1997's projection. Lower expected cash receipts for 1998 largely reflect the expectation of smaller returns for wheat, soybeans, and hogs. Cattle receipts are expected to increase by over \$1 billion in 1998.

Even with a slightly larger crop forecast, *corn receipts* for 1997 and 1998 are expected to be significantly lower than 1996 (figure 3). Corn receipts in 1997 fell by around \$3 billion, as 1997 corn prices, despite reaching their second highest level of the 1990's, averaged nearly \$1 per bushel below 1996 levels. Smaller exports also contributed to the lower corn receipts in 1997. Current expectations for a slightly larger 1998 corn crop, and prices similar to 1997, would yield corn receipts close to 1997's projection. *Wheat receipts* fell about \$1 billion in 1997 from 1996's almost \$10 billion. Production of wheat in 1997 was the highest since 1990, and as a consequence, prices were lower due to abundant supplies. With an average or better crop and increased stocks from 1997's large harvest, wheat prices and receipts are expected to be lower in 1998. Increased *soybean receipts* prevented total crop receipt forecasts from declining further in 1997 and are expected to add stability in 1998. Soybeans earned close to \$2 billion more in 1997 than the record \$16.2 billion in sales obtained in 1996. The 1997 increase follows the upward trend of soybean receipts occurring throughout the 1990's. With the largest acreage ever planted to soybeans (70 million) there will be record 1997 production to sell. Yet even with the larger crop, prices have remained fairly strong after the harvest. A vigorous export market contributed to the increase in soybean receipts for 1997, which is projected to be the third best export year on record. A return to average output and slower international trade in 1998 could lead to a decline of \$1 billion in soybean receipts.

Livestock receipts in 1998 will be about \$1 billion below the \$93 billion attained in 1996 and 1997, due mainly to a \$2 billion decline in hog receipts (figure 4). Hog production is expected to continue rising through 1998. Even with lower expected prices, hog receipts in 1997 remained roughly \$12 billion, the level achieved in 1996. Smaller anticipated pork exports to Asian markets are a factor in lower projected pork prices. After a steady decline during 1994-96, cattle and calf receipts increased by \$2.5 billion in 1997, and are expected to rise another \$1 billion in 1998. Poultry receipts in 1998 are expected to remain near the 1997 level of \$21 billion, as slight increases in broilers offsets declines in turkeys and eggs.

Already a relatively small portion of cash sources of income (3.3% in 1996), *direct government payments* are expected to begin declining in 1998. In 1997, payments represented a mixture of funds from former commodity programs and disbursements based on production flexibility contracts as provided for in the 1996 Farm Act, including advance payment for 1998. Payments received in 1998 are governed by the new legislation, and total government payments will begin to follow the declining levels allocated for production flexibility contract payments through the year 2002.

Total farm production expenses increased about 2.7 percent (\$4.8 billion) in 1997, the smallest rise since total expenses decreased slightly in 1992 (figure 5). From 1993 through 1996, total production expenses rose \$6.7-\$7.6 billion (4-5 percent) each year. In 1998, in response to slightly lower planted acreage and a fall in the number of cattle on feed, total outlays are forecast down around \$600 million dollars, a decrease of around 0.3 percent. This would be the first decrease in total farm production expenses since 1992. The robust domestic economy, with its anticipated low inflation, stable interest rates, and favorable oil prices, will help contain farm production costs.

Farm Assets, Debt, and Equity Continue Upward Through 1998

The value of U.S. farm business assets is expected to exceed \$1 trillion in 1997 and continue growing through 1998 (figure 6). The value of farm real estate, the largest share of the sector's assets, increased 5.9 percent during 1997. Reflecting the favorable long-term prospects for the sector, farm real estate values are expected to grow by 5 percent in 1998. Farm business debt is expected to grow a little over 3 percent in both 1997 and 1998. The combination of strong growth in the value of farm assets and a modest expansion in farm debt indicates a rising net worth (equity) for the farm sector in 1997 and 1998.

Farm business debt is projected to reach \$162 billion by the end of 1997, and to rise another 3 percent in 1998. Rising debt levels do not signal pending financial distress in the farm sector. Despite the increase in debt, farm business balance sheets have shown steady improvement throughout the 1990's. Debt-to-asset ratios have improved, as the 16-percent increase in farm business debt from 1992 through 1997 has been more than offset by the 25-percent rise in the value of farm business assets.

The expected rise in *farm business equity* in 1998 reflects the increase in farm asset values relative to the rise in farm debt. In today's dollars, \$1.083 trillion in assets minus \$167.6 billion in farm debt yields a sector net worth of nearly \$964 billion. Farm sector equity by the end of 1998 is expected to be almost \$90 billion more than in 1996, and over \$300 billion greater than in 1985.

Indicators used to measure the solvency of the farm sector remain favorable for 1997 and 1998. The *debt-to-asset ratio* indicates the relative dependence of farm businesses on debt and their ability to use additional credit without impairing their risk-bearing ability. The lower the debt-to-asset ratio, the greater the overall financial solvency of the farm sector. The debt-to-asset ratio is forecast to be 14.8 percent in 1998, down slightly from 15.0 percent in 1997. Over the last decade, this ratio has been declining steadily from 23 percent in 1985 to 15.6 percent in 1995.

Current income rates of return on farm assets and equity, indicators of the profitability of farm sector investments, remained near 1996 levels in 1997. Total *returns on farm business assets*, including capital gains, declined from 6.5 percent in 1996 to 5.7 percent in 1997, derived from 3.7-percent growth in current income and 2-percent growth in capital gains. Total returns on farm business assets are forecast at 5.2 percent in 1998, reflecting both the lower expected returns to farm assets from current income and somewhat slower appreciation in farm asset values.

Impacts Vary by Type of Farm

For most farms in most areas, 1996 was an exceptional income year. The projected 9-percent decline in sector-wide net cash income in 1997, followed by an additional 3-percent decrease in 1998, will not be evenly distributed across all U.S. farm operations. Changes in cash receipts drive changes in net income for farm operations producing those commodities. Only cattle producers, coming off the lows of 1994-95, are expected to see measurable increases in their net cash incomes in 1998 from 1996. Producers of tobacco, and speciality crops such as fruit, vegetable, greenhouse, nursery, and other livestock may have modest increases while producers specializing in wheat, corn, cotton, hogs, and dairy are expected to experience drops in net cash income from farming from 1996 to 1998. Farm operations specializing in production of these commodities will likely begin to feel additional financial stress in 1998, especially if they entered the year with a substantial debt load to service.

The changes in distribution of income among farm types reflect the beginnings of a geographic shift in the distribution of production in response to elimination of direct Government commodity support programs and changing consumer preferences (figure 7). Increased market reliance is expected to shift production of commodities among states based on comparative advantage. Acreage of corn planted in seven Midwestern states (OH, IN, IL, WI, MN, IA, NE) increased in 1997, and accounted for two-thirds of all corn acres planted, while acreage planted in nine Southeastern states (TX, LA, AR, MS, TN, AL, FL, GA, SC) declined nearly 10 percent

form 1996, as farmers responded to greater planning freedom by increasing acreages of soybeans and other crops.

Farm Borrowing Increase Does Not Signal Rise of Financial Stress

The recent and projected increases in farm business debt are relatively small compared with annual changes during the 1970s, when outstanding loan balances grew at an average annual rate of over 12 percent (figure 8). Thus, farm operators' expanding use of credit is not expected to place excessive demands on their ability to service debt. Farmers are expected to use their available credit lines more fully in 1998, as evidenced by the rise in *debt repayment capacity utilization*. (figure 9) For farm operators, income available for debt service can be used to determine the maximum loan payments a farmer could make, which determine the maximum debt that a farmer could service, given current market interest rates and an established repayment period.

Farm debt repayment capacity use (actual debt expressed as a percentage of maximum feasible debt) effectively measures the extent to which farmers are using their available lines of credit. In 1998, farmers are expected to use available credit lines more extensively. Use of debt repayment capacity rose from 45 percent in 1993 to 56 percent in 1995. Despite the 1996 rise in farm business debt, high net cash income levels and lower interest rates resulted in a drop in use of debt repayment capacity to 49 percent. The effects of expected favorable interest rates throughout 1997 and 1998 will not be sufficient to offset the combined effects of rising debt and lower net cash income, which was reflected in the rise of debt repayment capacity utilization to 56 percent in 1997. Farmers are expected to use about 61 percent of the debt that could be supported by their current incomes in 1998. While this indicator will reach its highest value since 1986, it remains substantially below the levels attained during the widespread farm financial stress of the mid 1980's.

Most Farm Households Receive Substantial Off-farm Income

Most farm households rely heavily on off-farm income because their farms are too small to support a modern standard of living. Since the official definition requires an operation to have only \$1,000 worth of agricultural sales to qualify as a farm, a large number of rural households are classified as farm households despite very low or negative farm earnings. Limited sales typically result from only modest resources being devoted to farming or from a low return on farm assets.

USDA's Agriculture and Resource Management Study indicates that, on average, farm operator households received only 16 percent of their 1996 income from farming (figure 10). Their household income from both farm and off-farm sources, however, averaged \$50,361, similar to the \$47,123 average for all U.S. households, while those operating farms with sales of at least \$50,000 received 55 percent of their income from farming, earning an average of \$40,623 from farming activities. These farms' total household income averaged \$74,519, or 58 percent more

than the average for all U.S. households. These households, however, accounted for only about 26 percent of all farm households.

Households operating farms with sales less than \$50,000, which made up 74 percent of all farm households, relied on off-farm sources for virtually all of their income. On average, farms with less than \$50,000 in sales lost money farming, but received \$45,418 in off-farm income. Wages and salaries were the largest component of their off-farm income and accounted for 61 percent of their total off-farm income. Because of their off-farm income, the total average household income for this group of farms was near the average for all U.S. households.

Average operator household income projections for 1997 and 1998, in nominal terms, are not significantly different, statistically, from 1996. The forecast decline in earnings from farming would be expected to have the greatest effect on households most dependent on farming for income, which are typically those operating larger farms. Households operating smaller farm businesses will continue to rely heavily on off-farm income, particularly wages and salaries, for their livelihood. Fortunately, the demand for rural workers has been strong since the 1990-91 recession, with the tighter rural labor market resulting in higher real wages.

Baseline Projections Longer Term Farm Income and Farm Financial Conditions

Farm income prospects for 1997-2007 appear favorable, although not buoyant, at this reading of the key factors influencing sector receipts and expenses (figure 11). Net cash income through the end of the millennium, and into the early 2000s, is projected to hover around \$56-57 billion. At this level net cash income will average higher than the first half of the 1990s (\$53 billion for 1990-95), but fall below the record \$60 billion achieved in 1996. If current expectations prevail, a steady growth in net cash income will begin in the early 2000s, eclipse the 1996 record, and continue until the end of the baseline. The rate of projected growth over the baseline period (1997-2007) is a modest 2 percent per year. With an expected inflation of 3 percent annually, the sector's inflation-adjusted net cash income by the end of period could be lower than achieved in 1997. The implication is that real net cash income in the future, unless key variables change notably, is expected to not look much different than it does today.

The baseline projections of net farm income are an abstraction from the substantial variability typical of this measure, which, through incorporation of inventory adjustments, reflects more fully the impact of annual swings in production and prices. Since annual variations in weather, crop yields, and indirectly market prices cannot be foreseen, projections of net farm income are represented as a slow but steady rise to end of the base line period. Net farm income is projected to be higher than the early 1990s (\$44 billion), but not reaching 1996's record of \$52 billion until well into the baseline period. The rate of increase projected is approximately 2.5 percent, marginally lower than the expected rate of general inflation. In real terms, then, net farm income in 2007 may be little different than it is today.

In 1994, crop sales surpassed livestock sales as the largest source of receipts and is projected to remain so throughout the baseline period. The dollar value of crop receipts is projected to rise at a rate of 2.7 percent per annum. But with 3 percent inflation, the real value of crop output is declining slightly. The lack of growth in the real value of crop receipts reflects declining real prices. The quantity produced of major crops, such as corn, wheat, soybeans, and cotton is expected to increase over the baseline period. The trends projected for these commodities indicate that production will reach or exceed each of these commodity's record output by the end of the baseline period. Consequently, while crop output can be expected to expand, the larger cash receipts (in current dollars) will not likely be reflected in significantly larger real farm income.

Livestock receipts are expected to grow steadily, 2.4 percent annually, for a total of 27 percent over the baseline period. The overall rate of growth in livestock receipts is slightly slower than crops. Cattle and broiler receipts are projected to increase faster than dairy products, eggs, and hogs. The expected results of the cattle cycle during the baseline period is for a short-term decline in commercial beef output offset by higher prices, followed by both output and prices drifting upward toward the end. Commercial beef output is not projected to reach as high, nor are prices expected to fall as low, as occurred in 1996. A steady rise in broiler output underlies the projected rise in broiler receipts. By contrast, the expanded output of hogs expected during the first half of the baseline is foreseen as pressuring prices downward, resulting in lowered receipts to hog producers over much the 1997-2007 period. In real terms, the changes in livestock receipts projected for the baseline will not contribute to increasing real sector income.

Direct government payments are expected to trend downward. Payments in 1998 will be governed by the 1996 Farm Act, and total government payments will begin to follow the declining allocations for production flexibility payments through the year 2002. Almost all government payments are from production flexibility contract payments or Conservation Reserve Program (CRP) payments. The baseline assumes that production flexibility contracts payments continue at their 2002 levels beyond the expiration of the 1996 Farm Act. CRP enrollment is nearly flat after 2000, so CRP payments are relatively constant in those years. Beyond 2000, direct Government payments account for less than 3 percent of gross cash income, the lowest share since 1982. Thus, the farm sector increasingly relies on the marketplace for its income.

Total cash expenses grow moderately, at a projected 2.5 percent over the baseline. Expenditures for farm-produced inputs -- feed, feeder livestock, and seed -- show the least upward movement. Farm origin expenses, which represent about a quarter of cash farm production expenses, increase at an average rate of about 1 percent per year. The generally slow rise in farm product prices is also reflected in the prices of farm-origin inputs. Manufactured input expenses rise more rapidly (3 percent), near the pace of inflation. Interest expenses appear to represent a nearly stable share of cash expenses (about 8 percent) throughout, although interest rates on agricultural real estate loans rise slightly. Labor costs, which account for approximately 12

percent of cash expenditures, are projected to be the most rapidly rising expense item. Even so, labor expenses are projected to rise at about the rate of inflation.

Baseline farm business asset values rise at a slower pace than recent history, mostly reflecting increases in the value of real estate assets. Farmland values have risen at about 6 percent annually since 1993. Farm real estate values are forecast to rise 5 percent for 1998. The projected rate of increase in land values for the baseline is 4 percent, slightly above the inflation rate. Farm debt is projected to grow at an even more modest rate, reducing average debt-to-asset ratios to below 13 percent by 2007. Total farm business debt rose an average 3 percent during 1994-1997 and is projected at 2.4 percent over the baseline. Real estate debt is projected to rise slowly (2 percent per year), reflecting the present conservative attitude of farm operators toward borrowing to expand their basic resource base. Nonreal estate debt, a large share of which is turned over annually financing production expenditures, appears to rise slightly faster than the overall increase in cash farm expenses. With larger increases in farm asset than farm debt, farm equity rises during the baseline.

Structural Changes, Environmental Considerations

Over time, farmers' expanded freedom in producing to meet the demands of a competitive global marketplace, and their need to mitigate its inherent risks, will underpin structural changes already underway in the U.S. farm economy, as the number of farms continue to decline, the size of remaining operations continue to expand, and smaller operations increasingly rely on non-farm sources of income. Competition will maintain pressure on farm operations to contain costs, and to expand operations to take advantage of size economies that lower per-unit production costs. Environmental considerations may ultimately limit the size of farm production units. As livestock operations become more fully integrated, further expansion may be limited by local concerns over the environmental impacts of large animal populations on both air and water quality.

Cost Containment Remains Key Long-Term Factor

Several years ago, we identified cost containment as a critical factor relating to the long-term financial well-being of the farm sector. The relative strength of the U.S. economy and currency in increasingly competitive global markets will place continuing pressure on domestic prices and operating margins, making cost containment even more critical today and in the future. As operating margins tighten, reductions in per unit costs of output will be necessary to compete in world markets. Even with modest productivity gains, there will be increasing pressure either to expand farm size in order to spread costs over more units of output, or to adopt new technologies and production practices. Those operators unwilling or unable to expand will face even greater pressure to contain costs by farming in the most economically efficient manner. The availability and adoption of technological advances will continue to be an important factor in reducing per unit costs of production.

Data obtained in the 1996 ARMS indicate that cost-size relationships do exist for most types of farms (figure 12). Lower costs per unit of production do appear for larger farm operations, particularly for those specializing in the production of dairy, beef, corn, fruits and nuts, or vegetables. For example, corn farms with sales over \$1,000,000 had operating profit margins of 34 percent, and average unit costs of \$.70 per \$1 of output, while those with sales between \$250,000 and \$500,000 reported margins of 19 percent, and unit costs of \$.87.

Multiple Entities Share in Farm Operations' Ownership, Management, Risk, and Income

Traditionally, the farm sector has been viewed as a one farm, one operator paradigm. That view is becoming increasingly clouded, especially for larger and industrialized farms, where multiple parties share asset ownership, risk, income, and expenses related to the operation of the farm business. Methods used by farmers to acquire operating and other inputs vary by type, size, and location of farms and by characteristics of farm operators. These methods, ranging from outright purchase to complex leasing and contract arrangements, determine which providers are paid from operating income or other funds, and which providers share in the farm's net income. Sharing in the farm's business and financial risks is a characteristic that distinguishes between those input providers receiving a share of net income, and those whose inputs are treated as production expenses.

A farm operator's claim on a farm's net income is based on the ways the business secures its assets. Farmers use equity capital from a variety of sources. For example, they may use savings to buy land, equipment, or other inputs. Here, farmers would claim all the income earned from the use of the assets. Single-family farms, where the farm operator provides all the farm's assets and retains all the farm's net income, still dominate farm numbers. Single-family farms accounted for almost three-quarters of farms, however, these farms accounted for about one-third of the value of production.

More and more, a farmer's funds are combined with capital from outside the immediate family. Farmers get equity from a variety of arrangements, including partnerships and corporations, pooled funds, joint ventures, or co-ownership (including contracting) of either assets or commodities. In addition to family members, farm implement suppliers, merchandisers, processors, distributors, and other furnish resources to production agriculture. Those who share in net income also bear some of the farm's production risks. In twenty-five percent of farms, equity capital was received for use in production from multiple persons, households, or businesses (figure 13). Farms with these complex organizations produced more than 2/3 of the value of farm output.

Industrialization and Risk Management

Historically, farm operators have reduced risk by producing a diversified mix of crop and livestock enterprises. The food marketing system is evolving from one producing coarse commodities for bulk markets to one creating consumer products for specified markets. Control

of input usage, maintenance of product quality, and attainment of economies of size in production will require greater coordination of the various stages of agricultural production and processing, and greater specialization in individual stages by each participant.

Increased coordination is evidenced by the rising use of production and marketing contracts, and the rising degree of coordination between contractors and contractees. While the importance of contracting varies among commodities, almost one-third of total value of 1996 U.S. farm output was produced under a marketing or production contract (figure 14). A higher degree of vertical coordination will allow farmers to spread risks vertically throughout the coordinated farm-to-market production process, as contractors and integrators absorb some of the price risk. Income variability may be reduced for contractee farmers, as they become more specialized producers receiving fee income based on their contribution of service to a production stage within a coordinated production system.

Contractors are providing a larger share of inputs used in farm production of certain commodities. In return, contractors pay the farm operator a fee for the labor, management, facilities and other inputs that the farmer supplies. Contractors typically bear a large share of production and price risk, and earn the majority of net income from the commodity's production. In exchange, farmers may be able to expand their operations more rapidly than otherwise possible, and perhaps, with less debt and fewer financial risks. The proportions in which costs and revenues are shared between farmers and their contractors varies among commodities and generally depends on the amount of input and managerial oversight provided by the contractor.

Farmers' Adaptations to the 1996 Act and Beyond

The challenges facing agriculture will change the way that farmers manage their businesses. Much interest has focused on producers adaptations to the 1996 Farm Act, and on their use of alternative risk management tools. As the sector relies more on market forces, we recognize that farmers face an increased risk of business failure, as well as increased opportunity for success.

As farm income becomes more variable, risk management becomes more important. As supply or prices of products change, new technologies are adopted, or environmental constraints appear, farmers could experience higher (or lower) income, cash flow difficulties, changing expenses, or more debt exposure. While aggregate income for the sector, or the average net income per farm, could remain stable, variability in income for individual farmers could increase. The probability of extremes in receipts, both high and low, requires farmers to plan more carefully their finances, and production and marketing of goods.

USDA's Agricultural and Resource Management Study shows that indeed farmers are examining ways to respond (figure 15). In 1996, the latest year for which data is available, approximately 20 percent of producers either changed their management decisions or were considering a change, as a result of the new farm legislation. Strategies included in farmers' adjustments were diversification of commodities, forward contracting, hedging, and keeping an open line of credit.

Farmers growing program crops (those most affected by changing policies) were, in general, continuing to use the same level of management under the new legislation. Of those who had modified their management strategies, most were considering the use of contracting, diversification and hedging. Operators reported increased adoption of three strategies: maintaining a credit line, keeping cash reserve, and spreading sales over the year. Program crop farmers were using custom work less, perhaps because they were changing their mix of crops. While it is still too soon to project long-term changes in farm operators' risk management strategies that will evolve under a policy of greater market freedom, the 1996 ARMS provides a initial benchmark for following farmers' risk management behavior over time.

Closing Points

The Short-Term Outlook

- o Farm income prospects are strong for 1997 and 1998, but not equal to 1996 record.
- o Cash receipts expected to decline in 1998.
 - lower soybean and hog receipts.
 - higher cattle receipts.
- o Exports expected to contribute less to farm income in 1998.
- o Most farm households rely heavily on off-farm income.
- o Farm assets, debt, and equity continue to grow through 1998.
- o Farm operators use of debt repayment capacity rises due to lower income and rising debt.

Longer-term Projections

- o Farm income expected to rise at about 2.5 percent.
- o Inflation expected to rise at about 3 percent.
- o Farm sector will face low real growth rates.

Sector Continues to Face Structural Changes

- o Cost containment essential in competitive global markets.
- o Multiple entities share risk as well as income.

Figure 1

Farm income will be about average for the 1990s

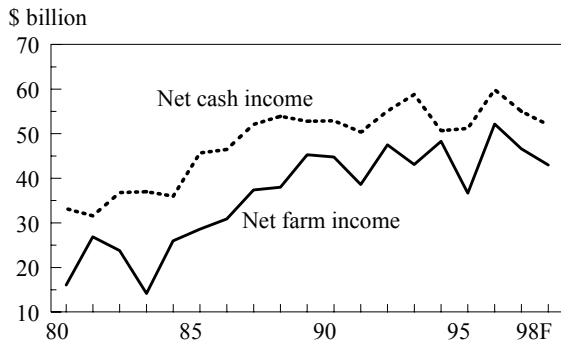


Figure 2

Crop receipts continue to exceed livestock

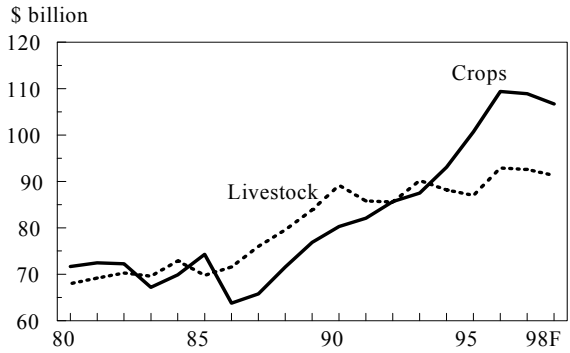


Figure 3

Crop receipts are expected to be lower

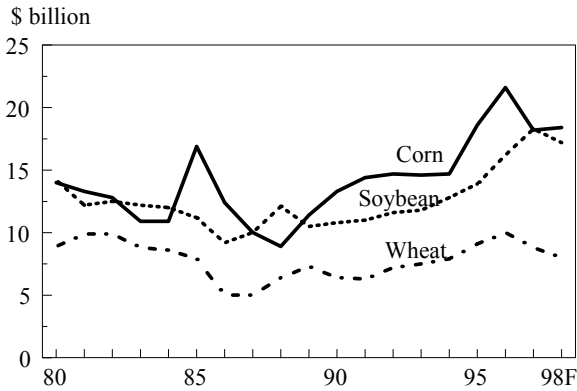


Figure 4

Lower hogs receipts offset rising cattle receipts

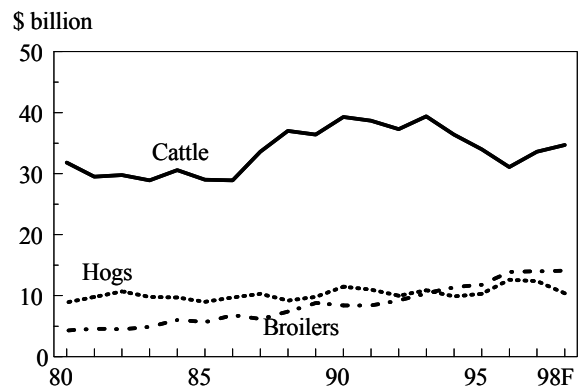


Figure 5

Production expense expected to decline slightly

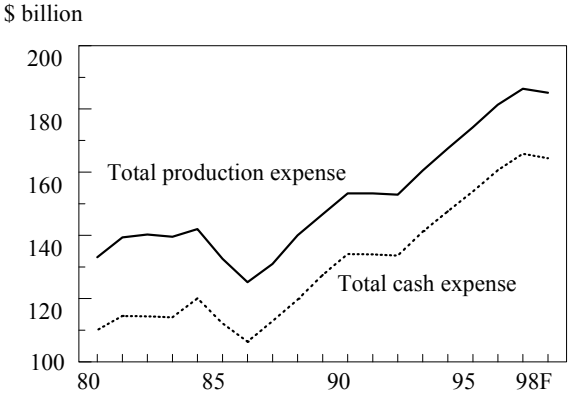


Figure 6

Farm assets, debt, and equity all rising

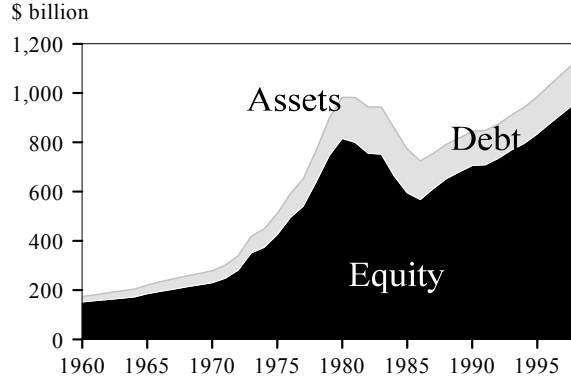


Figure 7

Regional Concentration of Production ?

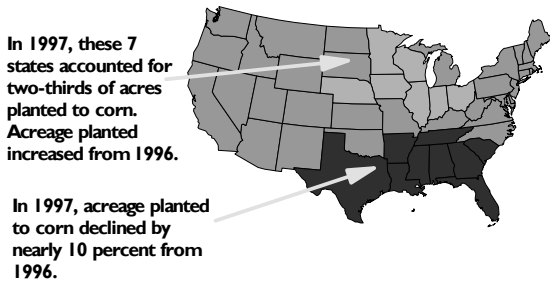


Figure 8

Year-to-year to changes in farm debt

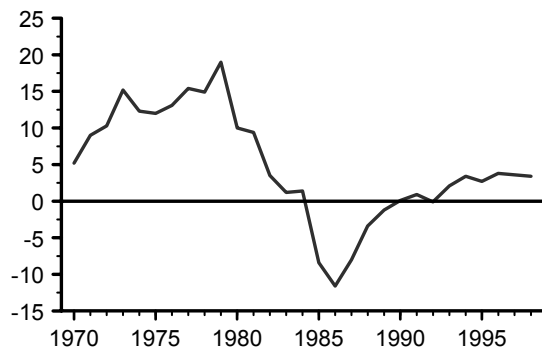


Figure 9

Debt repayment capacity utilization expected to increase in 1997-98

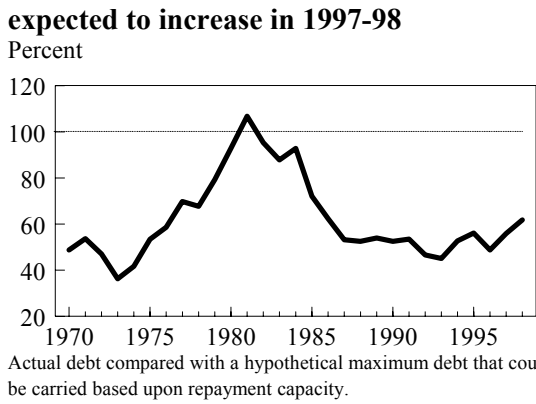


Figure 10

On average, the households of small farms depend heavily on off-farm income, while the households of larger farms depend mostly on farm income.

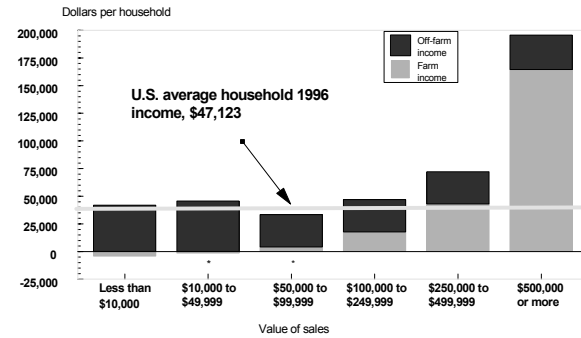


Figure 11

Farm income increases slowly over the baseline period

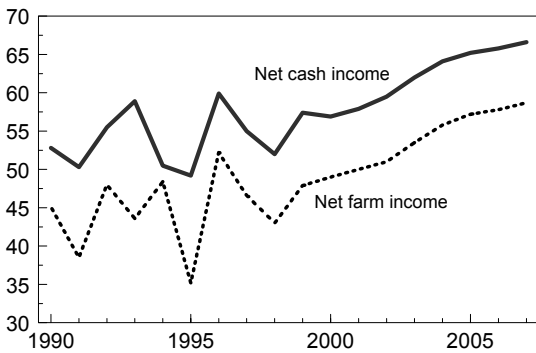


Figure 12

Larger corn farms produce at lower costs

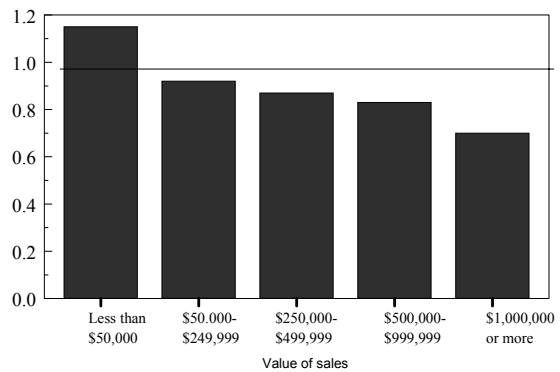


Figure 13
Farming is dominated by single-family farms
But, farms with multiple input-providers control more production relative to their numbers

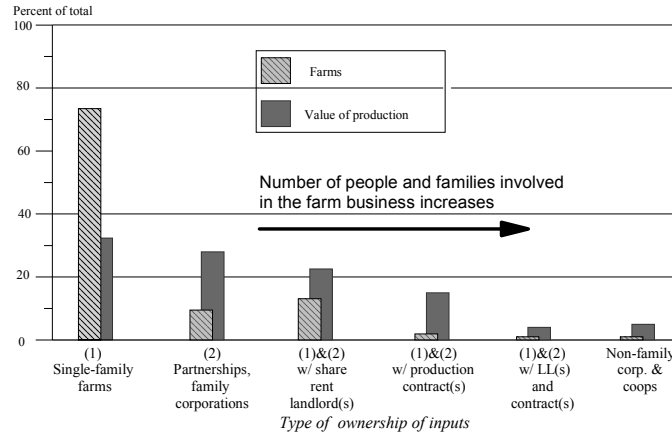


Figure 14
Production and marketing contracts, 1996

	Percent of contracts	Percent of production
Total	100.0	33.0
Wheat	2.1	12.9
Corn	7.3	17.7
Soybeans	5.0	17.4
Fruits/nuts	8.8	52.9
Vegetables	8.5	47.1
Hogs	4.4	32.1
Poultry	27.0	94.1

Figure 15
Farm program changes led to increased use of selected strategies
Others are considering new strategies, especially hedging

