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George Hoffman, Allen Smith and Gary Lucier  
Economic Research Service, USDA

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### OVERVIEW

Economic conditions in the farm sector have not been favorable during the past two years and current prospects suggest little improvement is likely for the next several months.

Under pressure from record agricultural production in the U.S. and weakening domestic and world demand, farm prices have declined through 1981. Prices received by farmers this fall are about 6 percent below a year ago and are at about the same level as two years ago. Crop production in the U.S. this year will be a record, up 14 percent from the 1980 drought-reduced harvest. World grain production is also at record levels this year while U.S. and world animal production is large. Significant price increases in the near future would come only with substantial increases in export demand and/or reduced crops in the Southern Hemisphere.

Growth in agricultural product consumption in the U.S. and overseas has not kept pace with growth in production. Following declines in 1980, real per capita income in the U.S. could rise only slightly this year. Real growth in most developed nations around the world has also been slower. This, along with the sharp appreciation of the dollar earlier this year has resulted in less-than-expected exports. Although some increase in demand is expected in the year ahead, real economic growth in the U.S. and abroad likely will continue sluggish.

Farm input prices have stabilized in recent months, but prices paid by farmers for production items are still about 5 percent above a year ago and almost 17 percent above two years ago. Record interest rates on the growing farm debt will more than offset the slowdown in other production costs, and will boost total production expenses 8 to 10 percent in 1981. If inflationary pressures in the general economy continue to subside, farm input prices will moderate in the year ahead. However, total interest expenses will probably rise substantially again in 1982. Nominal interest rates may decline, but likely will stay high by historical standards. Also, as retired debt at low interest rates is replaced by new debt at the higher rate, the average interest rate on all debt outstanding will continue to rise.

Many farmers are currently in a severe cash-flow squeeze as production expenses have risen faster than cash receipts for the second consecutive year. Current commodity price forecasts suggest no improvement is likely, at least through the middle of next year. Traditionally, farmers have been able to withstand short-term fluctuations in income by borrowing against farm

equity to cover production loans. However, record-high interest rates, slower rates of increase in land values, and low commodity prices will reduce credit availability to many operators.

When reviewing economic conditions in the farm sector, net farm income and cash flow are usually the focus of attention. It should be noted, however, that net income is only one measure of economic conditions in the farm sector. While net farm income declined substantially from 1979 to 1981, proprietors equity rose from an average of \$303,000 per farm on January 1, 1979 to \$379,000 on January 1, 1981--a 25 percent increase per farm in two years.

As farms have become more specialized over the years, aggregate income has become less descriptive of any particular group of farmers. Much of the decline in net farm income in 1980 and 1981, for example, was felt by the livestock sector and those crop producers hit by drought. In the year ahead, livestock receipts likely will gain relative to crop receipts. Thus, even though aggregate net income levels may be low for three consecutive years, all farmers will not share alike in those declines.

Many farmers have substantial off-farm income. Last year over 60 percent of total farm family income was from off-farm sources. Another major factor determining the economic condition of individual farmers today is their debt/equity position and reliance on credit. Farmers most severely impacted by current low commodity prices are those with recently purchased land or other assets, a high debt/asset ratio, and heavy reliance on purchased inputs requiring financing.

#### Cash Receipt Increases Slow

Cash receipts in 1981 will be up about 5 percent from 1980 with crop receipts up 7 percent, to about \$74 billion, and livestock receipts up 4 percent to \$70 billion. Prices received by farmers for livestock this year will be about the same as in 1980, but prices received for crops will be up about 7 percent. Cash receipts are currently expected to increase a modest 4 to 6 percent in 1982 reflecting increased crop and livestock marketings, but only slight increases in overall prices received by farmers.

In the livestock sector, lower cash receipts from cattle and calves in 1981 will be offset by higher receipts from hogs, poultry, and dairy. Cash receipts for cattle in 1981 will be down about 2 percent as a 5 percent reduction in cattle prices more than offset an estimated 3 percent increase in marketings. This year cattle prices will average lower than 1980, reflecting the increase in beef production and large total meat supply. Consumer demand has also been weak because of the slow growth of the general economy. Although beef production likely will increase again in 1982, cattle prices could also rise modestly if the demand picture improves. Receipts for cattle and calves in 1982, however, probably will still fall short of 1979 levels.

Hog receipts in 1981 will be up about 10 percent, reflecting reduced pork production but an increase in the price of barrows and gilts of about \$6 per 100 pounds. Even with the slowdown in the general economy, hog prices remained above 1980 levels throughout 1981. With an expected further decline in hog production in 1982, prices should average higher, resulting in a modest increase in hog receipts next year.

Receipts from broilers will be up about 7 percent in 1981 reflecting increases in production and slightly higher prices this year. Broiler production is expected to increase only slightly in 1982, but with some improvement in demand broiler prices will also be up again, increasing cash receipts as much as 10 percent.

Milk production in 1981 is expected to be up 3 percent and prices up 5 percent, pushing dairy cash receipts up about 8 percent this year. If milk support prices are not increased under the new farm legislation, dairy producers may begin to level off production next year, and dairy receipts would not increase significantly from 1981 levels.

As in 1980, crop receipts have risen more than livestock receipts this year. During the first half of 1981, reduced marketings from the drought-shortened 1980 crop and increased export demand kept crop prices and cash receipts well above year-earlier levels. During the second half of the year, record-high grain production and large harvests of other major crops combined with sluggish domestic and world demand, causing crop prices to fall below year-earlier levels. However, increased crop marketings offset lower prices, keeping cash receipts about even with year earlier levels in the second half. Increased marketings and lower prices will most likely prevail through the first half of 1982, moderating increases in crop receipts. Crop receipts during the second half of next year will be largely determined by the size of 1982 crops which will be planted next spring.

Food grain receipts in 1981 are expected to rise 12 percent as wheat receipts increase 10 percent and rice receipts rise about a fourth. With wheat prices for 1981 about even with 1980, all the gain in wheat receipts will come from increased marketings from the record large 1980 and 1981 wheat crops. Rice production is up 23 percent in 1981, far surpassing last year's record. Rice prices in calendar year 1981 will exceed 1980's level by 9 percent.

In 1982, food grain receipts may rise marginally if wheat production is reduced through a set-aside and prices rise modestly. Rice receipts in 1982 may stay near the 1981 level as large stocks and resulting price declines offset increased marketings.

Corn production is a record this year, up 22 percent from the small 1980 crop and 2 percent over the previous record crop in 1979. Corn receipts in 1981 may not rise much from last year's level, however, since most of this year's crop will be marketed in 1982. Corn prices and receipts were strong in the first half of the year, but with low second-half prices offsetting increased marketings, second half 1981 corn receipts will fall below year-earlier levels. This will leave 1981 corn receipts about the same as in 1980. Despite increased exports and feed use, 1982 corn prices may fall below the 1981 average. However, increased marketings from the record 1981 corn crop will offset lower corn prices, leaving 1982 corn receipts above 1981 by 6 to 8 percent.

Soybean receipts in 1981, like corn receipts, probably will not show much change from 1980 levels. With more than half of 1981 marketings coming out of the small 1980 crop, total soybean marketings will probably fall about 5 percent from 1980. Although soybean prices declined through 1981 as feed



use fell and world vegetable oil stocks rose, 1981 soybean prices will average about 4 percent higher than 1980, offsetting the decline in marketings. In 1982, soybean receipts should rise moderately with marketings up from 1981 and prices remaining near 1981 levels. Exports and feed use may fall below 1981 levels, but total domestic use will rise as crushings increase.

Cotton receipts in 1981 are expected to be up about 7 percent from 1980. Although 1981 cotton prices were down some, marketings in 1981 will rise about 11 percent over 1980, reflecting this year's large cotton crop. Roughly 60 percent of production is marketed in the current calendar year. Cotton exports were fairly strong in 1981 as other nations sought to build depleted inventories caused by last year's world production shortfall. Cotton supplies will be abundant through early 1982 as this year's large production exceeds projected consumption, resulting in substantial stock increases.

Cash receipts for vegetables in 1981 are up sharply in response to higher potato receipts and strong sales of other vegetables such as dry beans, tomatoes, and onions. Low potato production in 1980 depleted stocks and forced potato prices to historic highs last spring and summer, yielding record receipts for potato growers. A freeze in Florida last January damaged vegetable crops and pushed fresh market vegetable prices up substantially, thereby increasing receipts for growers not hurt by the freeze. For this year, fresh market vegetable prices will average almost 16 percent higher than 1981. Production of dried beans and potatoes are both up this fall. In 1982, vegetable receipts may decline slightly as prices for many vegetables are expected to fall. Receipts from potatoes and dried beans are both likely to decline as prices respond to the increased supplies.

Total receipts for fruits and tree nuts will likely rise about 5 percent in 1981 reflecting substantially larger supplies. Prices received by growers averaged lower, particularly for apples. Citrus supplies were reduced in 1981 resulting from the Florida freeze last winter and consequently citrus prices this spring were considerably higher than a year earlier. Production of almonds and walnuts was record large in 1981 and prices were lower, leading to only modest increases in receipts. In 1982, receipts from fruits and nuts will be modestly above 1981 levels as lower citrus production again leads to higher prices. Marketings of noncitrus fruits may also be reduced, leading to higher prices and receipts.

Tobacco receipts are likely to post a big gain in 1981 with production up 13 percent and farm prices up 17 percent. In 1982, tobacco receipts may level off if yields move back toward longer-term trends, causing production to decline. However, price gains may about offset lower marketings next year, stabilizing tobacco receipts near the 1981 level.

#### Production Expenses Slowing

Farm production expenses in 1981 are expected to increase about 9 percent, the smallest increase since 1977. Further moderation seems likely in the year ahead.

With some moderation in the underlying rate of inflation in the general economy, farm input price increases should also begin to moderate, especially for energy-based inputs such as fuel, fertilizer and chemicals. With the squeeze on farm income over the last two years, input use likely will not increase significantly. Consequently, farm production expenses in 1982 may rise only 6 to 9 percent, the smallest increase since 1975.

Table 1.--Prices Received and Paid by Farmers, 1977-81

	1977	1978	1979	1980	1981f
	----- Percent change from previous year -----				
Prices Received:					
Crops.....	- 2.3	6.2	8.9	8.0	7
Food grains .....	-22.5	22.2	19.9	12.2	1
Feed grains .....	-19.0	3.7	12.9	15.1	9
Cotton .....	1.4	-8.8	5.2	22.9	-5
Tobacco .....	7.3	9.2	7.9	6.5	13
Oil Crops .....	18.3	-6.7	10.2	-0.9	9
Fruits .....	25.9	47.8	-0.4	-12.2	-3
Vegetables .....	9.2	4.8	5.0	2.6	16
Livestock .....	-0.8	23.7	19.0	-2.4	1
Meat animals .....	-0.9	34.2	23.8	-6.3	-1
Dairy products .....	0.5	8.9	13.8	8.4	5
Poultry & eggs .....	-2.1	6.6	3.7	1.2	5
All Products .....	-1.5	15.1	14.5	2.2	4
Prices Paid:					
Production items .....	3.6	8.5	14.7	11.4	8
Feed .....	-2.4	2.0	11.8	12.6	10
Feeder livestock .....	2.9	39.6	32.4	-4.0	-5
Chemicals .....	-9.8	-6.2	2.0	6.7	9
Fertilizer .....	-2.2	-0.6	8.3	24.4	9
Fuels & energy .....	7.9	5.3	29.8	37.7	13
Farm/motor supplies .....	0.5	3.9	10.5	17.0	10
Autos & trucks .....	10.4	5.8	10.3	5.5	15
Tractors .....	9.4	9.1	11.5	11.9	11
Building & fencing .....	6.5	7.8	9.8	7.8	6
Services & cash rent:	8.5	6.8	9.9	10.2	10
Prod. items, interest :					
Taxes & wages .....	4.8	8.8	15.0	11.8	8

f - forecast

Farm production expenses for farm-origin inputs such as feed, purchased livestock, and seed make up about a fourth of total production expenses. Non-farm origin inputs such as fuel, fertilizer, chemicals, and repairs make up the remaining three-fourths. Farm-origin input costs are strongly influenced by prices received by farmers and therefore have increased very little in the past two years. However, non-farm origin input prices tend to closely follow the overall inflation rate, and have risen about a fourth from 1979 to 1981.

Feed prices were up about a tenth in 1981, reflecting last year's drought-reduced crop. However, reduced feed consumption will result in modest feed cost increases this year, largely reflecting lower production of pork and cattle feeding. Feed costs in 1982 are currently expected to remain about the same as this year as feed prices drop slightly, but feed use rises due to more cattle feeding and a turnaround in pork production.

Feeder livestock expenses decreased in 1981 as feeder livestock prices fell about 5 percent and livestock feeding was reduced. Feeder cattle make up most of feeder livestock sales and feeder steer prices in 1981 will average about \$6 to \$8 per 100 pounds below 1980 levels. Feeder pig prices were up, but these increases were not enough to offset the drop in feeder cattle prices. In the year ahead, feeder livestock expenses likely will increase significantly. Prices of feeders, both cattle and hogs, are expected to be up, and with improved livestock-feed price ratios more feeders will be purchased and placed on feed.

Seed costs may be up about one-fifth in 1981 as more acreage was planted and seed prices increased substantially. Although total acreage planted may be down some in 1982, higher seed prices next spring are expected to push up seed costs 5 to 10 percent.

Increases in interest rates have greater significance for the farm sector than ever before as agriculture has become more capital intensive and farmers finance a larger proportion of their annual operating costs. During the 1970's the farm sector's total debt increased an average 12 percent per year. Because of rising interest rates, interest expenses rose an average 17 percent per year during the 1970's and currently comprise about 13 percent of farmers' total production costs compared with about 7-1/2 percent ten years ago.

In 1981 total interest costs on real estate and non-real estate debt will reach about \$19 billion, a jump of nearly 20 percent from 1980. This is a result of increased debt outstanding and rising interest rates. The average interest rate on all debt outstanding in 1981 will likely be over 10 percent, a rise of nearly one percentage point from 1980. With moderation, or even some declines in the nominal interest rate on agricultural loans in 1982, the average rate on all debt outstanding will continue to rise as new loans carry a higher rate of interest than loans retired. The combination of higher average interest rates and continued rise in total debt outstanding suggest further substantial increases in total interest expenses for farmers in 1982.



Non-farm origin input prices may not increase as rapidly next year as in the past two years. Stabilizing prices for fuels and energy have had a large effect on slowing the growth rate in production expenses. Petroleum stocks have been large this year as consumption has declined in the U.S. and other countries, resulting in small increases in fuel prices. Following large increases of about one-third each year in 1979 and 1980, prices paid by farmers for fuels and energy will increase about 13 percent in 1981. With farm fuel consumption remaining about stable, expenses for fuel in 1981 will increase less than 15 percent over 1980. Barring unforeseen disruptions in the Mideast, fuel and energy costs in 1982 may further moderate, and rise 10 percent or less.

With energy costs slowing, fertilizer costs will increase about 12 percent in 1981 compared with an increase of over 25 percent in 1980. Fertilizer use is expected to be up slightly in 1981, in response to higher planted acreage, but fertilizer prices will increase less than 10 percent. Fertilizer use in 1982 may decline somewhat if planted acreage is lower. Fertilizer price increases next year are currently expected to be about the same as in 1981, resulting in an increase in fertilizer expenses of 10 percent or less.

Hired labor use this year likely will be about the same as 1980, but wages are expected to continue to increase at about the general inflation rate, boosting labor costs about 10 percent. In 1982, farm wages are expected to slip below the general inflation rate and labor costs may rise 6 to 7 percent.

Pesticide and other agricultural chemical expenses are expected to be up about 10 percent in 1981. Pesticide use will be up only slightly reflecting increased acreage, but prices have continued to increase at about the same rate as inflation. Pesticide expenses are currently expected to rise another 8 to 10 percent in 1982.

#### Cash Flow Squeezed

Although farm cash receipts have hit record-high levels each year since 1979, farmers' cash costs have risen faster, resulting in lower net cash income. Following a 17 percent increase in cash receipts in 1979, receipts rose only 3 percent in 1980 and are likely to grow only about 5 percent in 1981. Total cash expenses, however, will rise about 9 percent in 1980 and again in 1981, more than offsetting the modest receipt increases. Net cash income available to farmers for purchasing assets, loan retirement, and other expenditures has declined from record highs of \$37.6 billion in 1979 to \$33.0 billion in 1980, and will be down to about \$31 billion in 1981--an 18 percent decline in two years (see table 2).

Even if production costs moderate in the year ahead, to an increase of 6 to 9 percent, it now seems unlikely that commodity prices will strengthen enough to offset cost rises. Current prospects would indicate that cash receipts may increase in the range of about 4 to 6 percent in 1982. As a result, net cash income could decline another \$1 to \$3 billion, to the lowest nominal level since 1977.

In addition to cash receipts from the sale of agricultural products, the farm production sector also has other cash sources from real estate and nonreal estate business loans, net changes in currency and demand deposits,

and rent income from other farmers. A large proportion of the cash made available from loans would be expected to be used for the purchase of capital items--tractors, machinery and buildings. Net cash flow is the sum of net cash income from farming, loans, and rent, less capital expenditures, and is a measure of the change in cash available for household consumption, further business operations and purchases of farm real estate.

With the squeeze on farm income in 1980, farmers reduced their increase in borrowing from nearly \$21 billion in 1979 to under \$16 billion in 1980 (table 2). Capital expenditures were also reduced, but not as much as loans, resulting in a further drawdown in the farm sector cash flow. Current indications suggest borrowing during 1981 has picked up from the 1980 rate and farm debt could rise \$16 to \$20 billion this year. If capital expenditures remain near the reduced 1980 level of around \$18 billion, and with only modest increases in rent income this year, farm sector cash flow in 1981 could be about the same or slightly higher than 1980.

When measuring economic conditions in the farm sector in terms of the traditional net farm income accounts, which include income and expense imputations for the rental value of farm dwellings, the value of home consumption, depreciation and inventory changes, net incomes have been much more volatile and declines have been more dramatic since 1979. This has been partly due to the large component in production expenses for capital depreciation, but more importantly because of large inventory adjustments in recent years.

Between 1970 and 1973 net farm income jumped 135 percent followed by a decline of 45 percent through 1977. This cycle was then repeated with a 78 percent rise in net income between 1977 and 1979 followed by a 40 percent decline in 1980. After inventory adjustment, net farm income declined from a record level of \$32.7 billion in 1979 to \$19.9 billion in 1980, a drop of 39 percent. More than half of the decline (\$7.3 billion), however, was due to inventory change, as the bumper 1979 crops and resulting large carryover at the end of 1979 was followed by a drought-reduced crop in 1980 and the subsequent inventory drawdown.

This situation is now reversed as record crops this year will serve to raise inventories at the end of this year and add to net farm income. This has produced an unusual situation where cash incomes and net farm income before inventory adjustments will decline about \$2 to \$3 billion from 1980 to 1981, but net farm income after inventory adjustment in 1981 will total around \$22 billion, a gain of \$2 billion from 1980. Net income from farm sources will then average about \$9,100 per farm this year compared with \$8,180 in 1980.

The net farm income outlook for 1982 not only includes forecasts for next year's crops but also of carryover at the end of next year. Current prospects could be aggravated in coming months by large crops in the Southern Hemisphere and weak economic conditions throughout the world. Large 1982/83 world crops would further compound a large supply situation. In contrast, if Southern Hemisphere crops were reduced, foreign buyers began to aggressively bid for available supplies, and if world economic conditions improved dramatically in late 1982 in the face of small 1982/83 crops, a much stronger income

picture would result. The magnitude of swings in inventories and prices under such conditions are very large and will be a key determinant of the level of 1982 net farm income. Without knowing the level of 1982/83 U.S. commodity output or the potential usage based on world crop developments and economic conditions, the magnitude of the swings in commodity prices and inventories make forecasts made at this time highly tentative.

Despite the current uncertainties, there is little evidence of a good year for farm income in 1982. It would seem likely that cash income could be down another \$1 to \$3 billion. Declines in net farm income after inventory adjustment would be even greater, assuming a return to more normal crop yields in 1982. For the third consecutive year many farmers will need to reschedule debt and defer capital expenditures.

Table 2.--Net Cash Income <sup>1/</sup>

	1977	1978	1979	1980	1981 <sup>f</sup>
----- Billion Dollars -----					
Cash Receipts:					
Crops .....	48.7	53.7	63.4	69.0	74
Livestock .....	47.6	59.2	68.5	67.4	70
Total .....	96.3	112.9	131.9	136.4	144
Government Payments .....	1.8	3.0	1.4	1.3	2
Other Cash Income .....	1.6	1.7	2.1	2.2	2
Total .....	99.7	117.6	135.4	139.9	148
Cash Expenses .....	73.6	82.3	97.8	106.9	117
Net Cash Farm Income .....	26.1	35.3	37.6	33.0	31
Change in Loans:					
Real Estate.....	6.6	6.5	10.9	8.6	10
Other .....	5.7	8.3	10.0	7.1	8
Change in Currency .....	0.1	0.1	0.1	0.1	0
Rent Income .....	4.6	5.6	6.1	6.6	7
Total .....	43.1	55.8	64.7	55.4	56
Capital Expenditures .....	16.8	17.9	19.9	18.4	18
Net Cash Flow .....	26.3	37.9	44.8	37.0	38

<sup>1/</sup> Excludes farm households.

f - forecast

## Farm Debt Increases

While net farm income is currently depressed, the value of farm sector assets has continued to rise somewhat faster than farm debt, resulting in an increase in farm equity. At the beginning of 1981, total assets of the farm sector, including households, were \$1.09 trillion. This was balanced by total liabilities of \$175 billion and proprietors equity of \$916 billion. While net farm income declined in 1980 and remained low in 1981, per farm equity at the beginning of 1981 was almost \$380,000. Serious cash flow problems over the last two years, however, have forced many farmers to borrow heavily against their equity to finance current-year farm operations.

Table 3.--Farm Income <sup>1/</sup>

	1977	1978	1979	1980	1981f
----- Billion Dollars -----					
Cash Receipts:					
Crops .....	48.7	53.7	63.4	69.0	74
Livestock .....	47.6	59.2	68.5	67.4	70
Total .....	96.3	112.9	131.9	136.4	144
Government Payments .....	1.8	3.0	1.4	1.3	2
Other Income <sup>2/</sup> .....	9.6	11.0	13.3	14.8	16
Total Income .....	107.7	126.9	146.6	152.5	162
Production Expenses .....	90.3	101.1	119.2	130.7	143
Net Farm Income					
Before Inventory Adj. ....	17.4	25.9	27.4	21.9	19
Inventory Change .....	1.0	0.6	5.3	-2.0	3
Net Farm Income					
After Inventory Adj. ....	18.4	26.5	32.7	19.9	22
----- Dollars -----					
Income Per Farm:					
Farm Sources .....	7,489	10,861	13,456	8,180	9,100
Off-farm Sources .....	10,313	11,533	13,667	14,820	16,100
Total .....	17,802	22,394	27,123	23,000	25,200

<sup>1/</sup> Includes farm households.

<sup>2/</sup> Includes income from recreation, machine hire and custom work, the imputed value of farm operator dwellings and the value of farm products consumed on the farm.

f - forecast

Farm debt has nearly doubled in the past 5 years and has become a major source of increasing cash flow problems. The farm sector's debt servicing burden has increased even more sharply due to higher volume of debt, to greater reliance on higher open market interest rates and the roll-over of old debt at higher current rates. As a result the farm sector's debt-income ratio has doubled over the past two years.

Farmers have coped with cash flow problems by rescheduling debt payments, taking on more debt, and postponing large capital expenditures. Reflecting declines in net income during 1980, farmers tightened their belts and reduced capital expenditures by about 8 percent (see table 2), the first year-to-year decline since 1968. With lower capital expenditures, total debt also rose more slowly than in 1979. After two years of reduced incomes, current indications suggest farmers are continuing to curtail capital expenditures. However, debt outstanding may rise by 10 percent or more by January 1, 1982, as farmers borrow more heavily to cover current year operations. After two years of restricted cash flow, it has become increasingly difficult for farmers to service existing debt and after two years of deferred capital expenditures machinery and equipment need to be replaced. The availability of credit will become an even greater problem if asset values, particularly farmland values, rise more slowly or stabilize and lenders become less willing to extend credit secured by farm real estate.

### Income Variability

The farm sector has become more diverse over the years and aggregate indicators are less useful for describing the economic conditions for any particular group of farmers. Net incomes are highly variable depending upon commodity produced, region, farm size, debt structure and off-farm opportunities.

Crop farmers have generally fared better than livestock farmers over the past two years. After deflating by the input price index, crop cash receipts in 1981 were only reduced about 4 percent from 1980, and 1980 receipts were the highest in several years. Deflated livestock receipts dropped 5 percent in 1981, but were 16 percent below 1979.

Within the crop sector, wheat and corn producers have had rising real receipts while deflated soybean receipts declined 18 percent over the period 1978-81. Crop farmers whose yields were severely reduced last year due to drought were not able to take advantage of high prices in 1980 and therefore likely had low incomes in 1980-81. Many crop farmers in the Eastern Corn Belt and Lake States, however, had record yields and many may have had the highest incomes ever. In the livestock sector, deflated receipts to cattlemen have declined 27 percent from 1979 to 1981 while dairy receipts have risen.

During the past two years one of the most important determinants of the economic condition of individual farmers has been their level of indebtedness and reliance on credit to finance farm operations. Well-established farmers with low debt and minimal credit needs will be better able to withstand temporary periods of cash flow declines than will new entrants to farming. Some farmers with recent large asset purchases financed at high interest rates may be forced to liquidation. Generally, large farms are more likely



to be overextended on debt. Farms in the smaller sales classes of less than \$10,000 of sales per year have debt to asset ratios of 5 to 7 percent compared with an average 20 percent for farms with sales of \$100,000 or more this year.

Total income of farm operator families depends importantly on off-farm sources of income. In 1980, farm operators averaged less than 40 percent of their total income from farming and over 60 percent from nonfarm sources. Operators of small farms, with total sales of less than \$5,000 of agricultural products per year, generally receive less than 10 percent of their total income from farm sources. For those farms with sales over \$100,000, however, farm income made up nearly three-fourths of the total income. Small farmers are more dependent on the general economy for their well being, but large farmers are affected greatly by the variability in farm income.

### Summary

The farm sector has experienced a second and faces the possibility of a third year of low net income. Net cash income from farming in 1981 will be about 18 percent below 1979 peaks and further declines are possible in the year ahead. After adjusting for depreciation of capital assets and farm inventories, net income declines are even greater.

Record U.S. and world crop production, large livestock output, and relatively weak demand growth in the U.S. and abroad have combined to hold down farm receipts. The large volume of products to be marketed from the bumper 1981 harvest likely will keep farm prices low and limit increases in farm receipts, at least through mid-1982. Farm production expenses, led by increases in interest expenses, will rise as much or more than receipts, suggesting a continued squeeze on net income into 1982.

Farmers have coped with this cash flow problem by rescheduling payments, taking on more debt, and postponing large capital expenditures. However, after two years of cash flow declines, it has become difficult for some farmers to service existing debt. The debt-income ratio has doubled over the last two years. The availability of credit could become an even greater problem if asset values, particularly farmland values, rise more slowly or stabilize and lenders become less willing to extend credit secured by farm real estate.

The farm sector is not homogeneous and broad generalizations do not adequately describe economic conditions for all farmers. There are wide income variations according to commodity produced, region, size and tenure of operators. Well-established farmers with a large equity base are better able to withstand short-term declines in income than are new entrants to farming or those farmers who have recent large capital purchases financed at high interest rates. While some farmers are overextended, the farm sector still has a relatively low overall debt-equity ratio of 16 to 17 percent and has a substantial per-farm equity base.

Farm operator families also receive substantial income from off-farm sources. Although net income from farm sources continues relatively low in 1981, total income per farm may exceed \$25,000, second only to 1979's \$27,123.

Gary L. Benjamin, Economic Adviser and Vice President  
Federal Reserve Bank of Chicago

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For Release:



George Hoffman has very capably summarized what can only be termed a very dismal farm income picture. He notes that the poor performance of this year follows on the heels of a sharp downturn in 1980. Perhaps most disparagingly--although not surprisingly--he sees little likelihood of improvement next year. In fact, he points out that farm income may be further eroded next year, although he acknowledges the many pivotal uncertainties that face us in 1982. He does suggest, however, that the heaviest burden of the depressed farm earnings will shift in 1982 from livestock producers to crop farmers.

I find no significant faults with the 1981 estimates that George has presented. For 1982, I tend to be somewhat less pessimistic than George, although our differences are minor. Since I don't object with the forecasts presented, let me utilize my time to recap the major estimates that George has given and then add some of my own comments and interpretations to the overall picture. In summarizing his estimates, I would like to recast them into a three-year perspective since we are in the midst of a three-year slide in farm sector earnings.

It has been pointed out that the growth in cash receipts has been very modest, particularly when viewed in terms of the highly inflationary environment that we face. The \$144 billion in cash receipts estimated for this year represents an increase of only 5 percent from last year and an increase of only 9 percent from two years ago. For the year ahead, it was suggested that the rise in cash receipts may again be held to about 5 percent. Overall, the forecasts imply a three-year increase of only 14 percent; short of the 17 percent annual increase that was achieved in 1978 and again in 1979.

In terms of production expenses, George notes that the annual increase in each of the past two years has been 9 to 10 percent. He is, however, looking for some moderation next year as reflected in the forecasted rise of 6 to 9 percent.

In terms of the three more commonly followed "bottom line" measures, George has suggested:

- Net cash income this year will likely fall to \$31 billion, a decline of 6 percent from last year and a decline of 18 percent from the 1979 peak. It was suggested that net cash income may decline another \$1 to \$3 billion in 1982.
- Net farm income before inventory adjustment was forecast to decline to \$19 billion this

year, down 13 percent from last year and down 31 percent from two years ago.

- Net farm income after inventory adjustment was forecast to rise about 10 percent this year, reaching the \$22 billion mark. The recovery, however, is almost inconsequential when we realize that net farm income would still be a third below the level of two years ago. For 1982, it was forecast that net farm income--both before and after inventory adjustment--would decline further, and that the decline would likely exceed the \$1 to \$3 billion slide expected in net cash income.

Let me now add a few of my own comments and interpretations of the farm income picture. I would like to start by complimenting George for something that he did not say; specifically that farm sector earnings the past two years, adjusted for inflation, have been the lowest since the Depression. Although true, such frequently heard comments clearly overstate the situation. Moreover, such comments are often incorrectly interpreted as a summary of the financial condition of farmers. The comments and the interpretations ignore three important factors.

First, such comments ignore the tremendous substitution of capital for labor that has occurred in agriculture in recent decades and contributed to a vast improvement in productivity and a substantial decline in farm numbers.

Second, such comments ignore the huge growth in off-farm earnings that farm operator families have enjoyed in recent decades.

Third, such comments ignore the huge increase in wealth that has accrued to owners of farm assets over the years. Farm operator families have received much of this wealth, although nonoperating landlords have also received a large share.

The following three comparisons illustrate the importance of these three factors. On a per farm basis, for instance, real farm earnings of farm operator families the past two years have been triple the levels that prevailed during the Depression and comparable to the levels that prevailed in the 1950s. Moreover, the purchasing power of total earnings per farm operator family the past two years--including earnings from farm sources as well as nonfarm sources--have been more than a fifth above the average annual level of the 1960s. Finally, the purchasing power of the equity in farm sector assets, on a per farm basis, at the beginning of this year was double the level of 10 years ago, 2½ times the level of 20 years ago, and 4½ times the level of 30 years ago.

In my view these comparisons depict a far more realistic picture of the financial health of farm operator families than do comparisons of farm sector earnings with the Depression era.

While conditions are not as bad as in the Depression, clearly the farm income picture is dismal. In my view, the most discouraging element in

the farm income picture is that it now seems probable that we will have three consecutive years of depressed sector earnings. That is a rarity, although it is not unique when compared to the mid-1950s. But there are a couple of factors that may render the current situation unique with respect to modern history. First, the current era of cyclically depressed farm earnings may be coinciding with the sustained, long-term efforts that will be needed to bring inflation under control. Second, the currently depressed farm sector earnings are coinciding with an apparent effort to scale back the government safety nets that in the past have cushioned the cyclical downswings in the agricultural sector. The withering of the safety net may be particularly apparent next year if an acreage reduction program for feed grains is announced to compliment the program already imposed for wheat producers and if producer participation in those programs is as low as has been suggested in earlier sessions of this conference.

The yet unanswered question is what will happen to farm asset values and to the debt/equity balance in agriculture as a result of three consecutive years of depressed farm earnings, a withering government safety net for agriculture, and the sustained efforts needed to bring inflation under control. Although perhaps not probable, it is possible that the historical data base of the past three or four decades may not provide the answer to this question.

In a related area, let me comment briefly on an issue that concerns many people; namely that there is likely to be a significant increase in farm auction liquidation sales if farm income is depressed for another year.

There is little doubt that more than the usual number of farmers will be forced to liquidate some or all of their operation if farm income remains depressed and debt-servicing charges remain high. The number involving real estate foreclosures and/or forced liquidations, however, will remain small. Even if the number of farm real estate foreclosures and/or forced liquidations doubles, it will still affect no more than 2 or 3 out of every 1,000 farms in this country. This would be far below the numbers that many people conjure up when procrastinating about the liquidation prospects from depressed farm earnings.

When thinking about forced liquidation, the tendency is to view it as a very negative development causing hardship for the affected individuals. Clearly, there are unfortunate casualties in a farm income squeeze. In particular, young individuals trying to get started in farming and farmers who bear the brunt of weather-related production shortfalls are among the unfortunates affected by an income squeeze.

But also among those most vulnerable to the downturn in farm earnings are farmers who greatly leveraged their large equity and income gains of the 1970s and embarked on an expansive growth program. In many cases, the popular media described these individuals as the success stories of the 1970s. In retrospect, it now appears the depressed of earnings of the early 1980s may not support some of those leveraged growth plans, resulting in forced liquidations. But we should realize that even with partial or complete liquidation, many of these former "fast-track" farm operators will emerge with greater net worths than their more modest expansion-minded counterparts simply because they did leverage heavily at a handsome return in past years. My point is simply that liquidation of highly leveraged farms, while not

conducive to the individuals desired scope of operation, may not be that detrimental to the individuals net worth.

In closing, let me comment briefly on what may be a shortcoming in the method of tabulating farm sector cash receipts. The estimate of cash receipts for any given commodity in any given month represents the amount of the commodity marketed by farmers in that month times the average price received by farmers for the commodity in that month. If my understanding is correct, the shortcoming of this system is that it assumes the commodity is priced in the month that it is marketed. With the greatly increased commodity price volatility of recent years and the increasing reliance of farmers on forward pricing and/or hedging of their commodities, the possibility exists that the current system may not be accurately reflecting farm sector receipts.

To illustrate my point, I would remind you that the December 1981 corn futures option briefly traded in excess of \$3.85 a bushel. To the extent that farmers forward contracted and/or hedged their 1981 corn when the December option was trading at that level, and subsequently delivered their grain in December, farm sector cash receipts would likely be higher than what will be reflected on the basis of average prices received by farmers in December. If I am correct that this shortcoming exists, I would encourage efforts to more accurately portray actual pricing transactions for farm commodities.



Steven R. Guebert, Farm Credit Administration

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It is my pleasure to be here this morning. Indeed, I must say that I am much more pleased to be here under the current circumstances than was the case when I last addressed a group in this auditorium. Several of you may recall that occasion. It was in January 1979. The audience was smaller, but I knew that I had the undivided attention of everyone in the room. At that time, I was head of USDA's farm income estimates, and I had the opportunity of explaining to several hundred protesting farmers just how in the world my staff came up with farm income estimates showing a 40% jump in net farm income for 1978 over 1977.

Actually, once we got into the details of the estimates, tensions in the room were greatly eased. Nearly all of the increase in cash receipts during 1978 had been result of higher livestock prices. Crop receipts, especially for the grains and cotton, had held fairly flat or were on a downward trend for several years.

My reasons for causing you to reflect back to several years ago are two-fold. First, conditions in the agricultural economy are bleaker now than they were three or four years ago. This may not be fully realized, but if things do not improve within the next couple of months, the extent of financial difficulties will come into much sharper focus.

My second reason for reflecting back is to point out how quickly things can change when we are looking at farm income prospects. At the outset of 1979, farm income prospects were not particularly bright. Yet, as events unfolded, it turned out to be a reasonably good year. And late that year, as we looked into 1980, it was fairly clear that even with bullish export projections, our record crops were likely to create downward price pressure and a sizable drop in net farm income. The actual drop was somewhat greater than projected--it turned out at the bottom end of our forecast range. And I am sure we all recall the rosy forecast presented one year ago for the current year.

In his speech on Monday, Dawson Ahalt mentioned that the income prospects for 1982 are volatile, but that there is little reason for predicting a good year. I concur. I also find very little to disagree with in the more detailed presentation by George Hoffman. For those waiting to hear a specific number, I do not have one. I will say that under present agricultural commodity and economic conditions, there is little doubt in my mind that we would see a sizable drop in net farm income during 1982. But I doubt that anyone would have much confidence in predicting that the current supply/demand conditions facing agriculture will hold constant in 1982. I think that nearly anyone who analyzes this situation would say that improvement is the more likely possibility. The only areas of disagreement would be on how much and how soon.

USDA's analysis does assume some strengthening through a stronger second-half economy and a return to more normal, trend crop production. Unfortunately, it will take a quicker or more pronounced change to keep net farm income from falling in 1982. I would also note that even if improvement does start earlier, there will be some sluggishness in translating a higher gross income into a higher net. Much of the improvement on the gross side would go toward increased outlays for inputs. I think we would see input prices rising faster than they otherwise will and also farmers would purchase greater quantities as well as some items that they otherwise would forego. As far as agri-business is concerned, and I would think most farmers as well, this latter development would be a much more desirable situation even though the net may be only marginally higher.

In part, what I am saying is that net farm income is not a very revealing measure of overall economic activity in agriculture. I fully appreciate that net farm income is a politically sensitive number and that it can make for good press material. And I am not suggesting that we can or should ignore some of the problems it may be signaling. But, as far as most of you in this audience are concerned, the economic viability of the agricultural economy may be a more straight forward function of changes in farm cash receipts that it is of what happens to that residual item known as net farm income.

I say this for pragmatic reasons. One is that I have heard from a number of agri-business people over the years who say they have found farm cash receipts to be a better predictor of their business activity than have net farm income measures. Secondly, I suggest to you that farm cash receipts as estimated in the farm income accounts of USDA are much more attuned to the real world counterpart than is the thing we call net farm income. In short, farm input purchases are made out of gross; net is what is available after expenses are paid, for consumption or expansion.

Having said this, I note that the outlook for cash receipts that George has presented is not encouraging. But it is less bleak than the net income forecast. For 1982 he called for an increase of 4 to 6 percent, or for about 6 to 9 billion dollars. As I am sure that George would agree, there is a fairly large forecast error associated with that prediction.

To illustrate how sensitive farm cash receipts are to changes in farm commodity prices, consider how much of a price change it would take for any one of several major commodities to generate or for that matter lose, a billion dollars of cash receipts. For soybeans it is about 50¢/bu; corn 20¢/bu; wheat 40¢/bu; and cotton about 17¢/cwt. On the livestock side, for beef cattle it is about \$2/cwt, hogs \$4.25/cwt. and broilers about 6¢/lb. For many of these major commodities, the projected 1981/82 price ranges that have been presented during the conference exceed these changes. Further, several of these commodity prices tend to move together; so a swing in a group of prices can add to cash receipts rather quickly.

I would like to make several comments about the effect of high interest rates on farm income. George stated that interest charges now account for about 13 percent of farm production expenses. That is for the nation's farms as a

whole. Obviously, interest is a much more dominant cost element for those producers who are highly leveraged with external financing. Interest rates also affect the seasonal prices of stored farm commodities through discounts for carrying charges. Thus, high interest rates affect farmers both on the receipt and the expense side of their accounts.

In my judgement interest rates are affecting net farm earnings more now than in any past period. Yet, I would agree with a comment in the paper by David Lins from yesterday's credit session that high interest rates are not the major cause of this year's low net farm income. Farm prices and earnings are weak primarily due to abundant crop and livestock supplies which are currently outpacing our domestic and foreign demand.

I would also note that interest income is probably an important part of that nonfarm income or off-the-farm income that George has referred to in his presentation. Among people with self-employment income from farming, interest and dividends are the most frequently cited sources of nonfarm income though these have not been leading in terms of dollars. And of course for those producers in a tighter cash flow and heavy debt situation, we would not expect them to have much interest earning capacity.

I would like to conclude with a few comments about the near term cash flow situation. I understand that next month there may be about a billion dollars in deficiency payments going to producers. This would be mainly to wheat and cotton growers with a little going to rice. A second point is that I would expect grain producers to make significant use of Commodity Credit Corporation loans--both under the regular program and the farmer-held reserve part. Nearly all producers are eligible and the interest rate and storage payments are fairly attractive. Finally, with the weakening economy and possible falling of interest rates, at least for a brief period, there may be some commodity price response providing opportunities to command better prices.