FEDERAL RESERVE BANK OF CHICAGO

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FARM INCOME ESTIMATES have recently undergone substantial revisions by the U.S. Department of Agriculture. The revisions are applicable back to 1970 as well as to the forecast for this year. In all cases, the revisions led to higher estimates of net farm income. Interestingly, the largest upward revisions coincided with the years of low farm income such as 1976, 1977, and 1980-82. More importantly the forecast of net farm income for this year was raised considerably. The USDA is now projecting that net farm income in 1983 will range somewhere in the neighborhood of $25 to $29 billion. That range is up sharply from the previously forecasted range of $18 to $22 billion and also up sharply from the revised estimate of $22.1 billion for last year.

The USDA annually reviews the farm sector income estimates for the most recent three-year period. The three-year overview provides a more accurate assessment of farmer marketing patterns—and, hence, receipts—for that period and an opportunity to revise expense estimates for the most recent year in accordance with the results of the annual survey of Farm Production Expenditures. The scope of the review this year was expanded by the discovery that technical factors had resulted in an over-estimation of some expense items for the past several years and by the results of the 1979 Farm Finance Survey from the Census Bureau that provided new benchmarks for some of the components of the income statement.

The revisions for the past three years were especially large. Prior to the revisions, net realized farm income had been estimated at $24.4 billion for 1980, $19.6 billion for 1981, and $20.2 billion for 1982. Following the revisions, the estimates were raised to $26.8 billion for 1980, $22.4 billion for 1981, and $23.9 billion for 1982. Similarly, the revisions to the series on "total net income"—which adds the change in the value of inventories to the net realized income measure—were also substantial. Prior to the revisions, the estimates for total net income the past three years had averaged $21.9 billion. Since the revisions, the past three-year average is 12 percent higher at $24.6 billion.

Revised farm income statistics foreshadow an upturn this year

	1980	1981	1982	1983*
	(- - - - - - billion dollars - - - - - -)			
Earnings				
Crop receipts[1]	72.7	73.1	74.4	65-69
Livestock receipts	67.8	69.2	70.2	68-72
Total receipts	140.5	142.3	144.6	135-139
Direct government payments[2]	1.3	1.9	3.5	10-14
Other cash income	1.6	2.0	2.1	1-3
Total cash income	143.4	146.2	150.1	148-152
Nonmoney income[3]	12.1	13.3	13.9	14-16
Realized gross income	155.5	159.4	164.0	162-166
Value of inventory change	–5.3	7.6	–1.9	(-1)-(-4)
Total gross income	150.1	167.1	162.2	161-165
Expenses				
Cash expenses	105.3	111.6	113.9	109-113
Other expenses[4]	23.3	25.4	26.2	NA
Total expenses	128.6	137.0	140.1	134-138
Income measures				
Net cash income[5]	38.1	34.6	36.2	37-41
Net realized income[6]	26.9	22.4	23.9	26-30
Total net income[7]	21.5	30.1	22.1	25-29

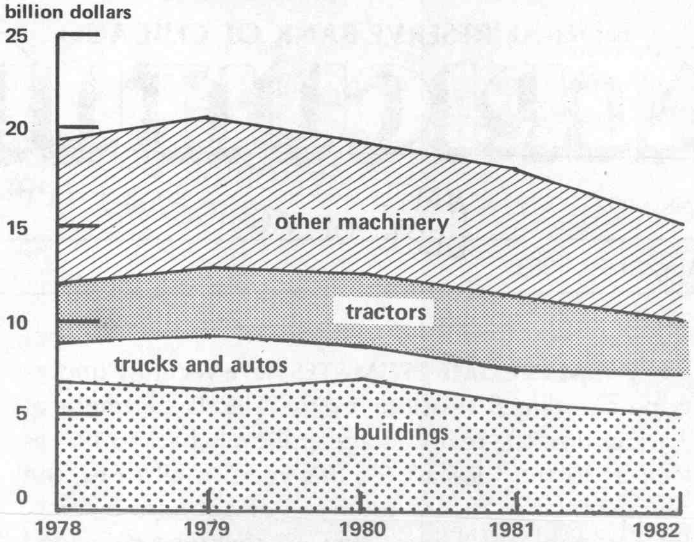
*Ranges forecast by USDA.
[1]Crop receipts include net loans made by the CCC to farmers.
[2]Figures prior to 1983 represent direct cash payments. The range forecast for 1983 includes point estimates of $4.5 billion in direct cash payments and $7 billion in "PIK" payments. The PIK payments are valued at the loan rate.
[3]Value of home consumption of farm products and the imputed rental value of farm dwellings.
[4]Includes depreciation of farm capital and perquisites to hired labor.
[5]Total cash income less cash expenses.
[6]Realized gross income less total expenses.
[7]Total gross income less total expenses.

The updated 1983 forecasts foreshadow little if any increase in farm sector receipts for 1983. But since production expenses are expected to decline $2 to $6 billion this year, all three of the more common measures of net earnings are expected to register sizable increases this year. Livestock receipts are expected to hold close to last year's level as a slightly larger volume of marketings offsets the projected decline in livestock prices. Crop receipts, however, are expected to be down considerably this year. To a large extent, the decline reflects the mechanics of accounting for the PIK transactions. The bulk of the PIK grain was acquired through an artificial redemption of CCC loans. These redemptions lowered net CCC loans $9 billion below what otherwise would have been the case. Since net CCC loans are included in crop receipts, the estimate of crop receipts was trimmed by a comparable amount. But over this year and next, the reduction in crop receipts will be offset by including PIK entitlements—valued at the loan rate—in with direct government payments. At the present time, the USDA believes that about $7 billion of the $9 billion in PIK entitlements will be distributed to farmers this year, with the remainder distributed next year.

The forecasted decline in production expenses—which, if it occurs, would mark only the third year-to-year reduction since 1940—mostly reflects the prospects for a 4 to 6 percent downturn in overall purchases of farm inputs. PIK and other government programs that led to a marked cut in 1983 crop acreage resulted in substantial declines in purchases of seed, fuel, fertilizer, and chemicals. In addition, nonreal estate interest expenses will be held in check this year by lower interest rates and a pronounced slowing in the rate of growth in nonreal estate farm debt. Moreover, depreciation expenses may record a rare decline this year, reflecting the substantial cuts in capital expenditures by farmers the past three to four years.

Farm income forecasts are always subject to revisions and the latest forecasts are no exception. In particular this year, there are the uncertainties regarding the timing of the PIK entitlement transfers to farmers. To the extent that transfers this year exceed the forecasted $7 billion (out of the total of $9 billion) net farm income for 1983 would be raised at the expense of farm income for next year. The reverse holds true if the transfers this year fall short of the projected level. Moreover, there is the uncertainty regarding the impact of the drought. The latest USDA farm income estimates were based on prospects for crop production and prices prior to the onset of the severe drought. With the growing intensity of the drought, crop prices have risen sharply. The impact on the farm income statement will be diverse, but on balance might foreshadow a somewhat stronger recovery in net farm income. In all likelihood, the drought will result in higher receipts from crop marketings since the price rise associated with the drought will likely exceed the drought-related reduction in marketings. But this will be somewhat offset since higher prices foreshadow a smaller-than-expected volume of CCC lending on 1983 corps. In addition, the drought will affect other components of the farm income estimates. For instance, the rise in feed expenses for this year—already forecast to be a tenth higher—may be even larger because of the drought. Moreover, the drought will affect the estimate of the change in inventory values. Smaller harvests—because of drought—portend a smaller year-end crop inventory. But the drought-related price rise could be more than offsetting in terms of the change in the value of the inventory. While the drought impact on the farm income statement will be diverse, USDA officials are now suggesting that the drought may push net farm income into the upper-end of the $25 to $29 billion range forecast for 1983.

Farm capital expenditures fell 15 percent last year



Gary L. Benjamin

CROP PRODUCTION PROSPECTS have withered with this summer's dry and hot weather. The USDA's first objective yield estimates, based on conditions as of August 1, suggested that feed grain production will be at a nine-year low and off some 35 percent from last year's level. The corn and soybean crops, following record harvests last year, were expected to be off 38 and 19 percent respectively. The continuation of adverse weather this month, however, suggests that even larger declines will be portrayed when the USDA releases updated estimates on September 12. Nevertheless, large carryover stocks will dampen the effects of production declines on total supplies and utilization.

The corn crop was placed at 5.24 billion bushels in the USDA's August projections. This estimate is based on a harvest of 52.4 million acres, a reduction of 28 percent from a year ago, and reflects a per acre yield of just under 100 bushels. This yield estimate is well off the 115 bushels of last year's crop and is 10 bushels below the 1981 level.

Soybean production was pegged at 1.84 billion bushels, down 19 percent from the 1982 crop. The estimate assumes that 62.1 million acres will be harvested, well under last year's 70.8 million acres. Per acre yields were expected to average just under 30 bushels, down from 32.2 last year.

In terms of worldwide prospects, the decline in domestic grain and soybean production will be partially offset by increases in other areas of the world. The USDA expects coarse grain production outside the United States will be up 5 percent from the 1982/83 level. Wheat and soybean production in countries other than the United States is expected to be up 2.5 and 6 percent, respectively. The large harvests outside the United States foreshadow considerable competition for U.S. grains in world export markets for the year ahead.

Large carryover stocks that have accumulated with record harvests in 1981 and 1982 will cushion the impact of the production declines on total utilization. Nevertheless, the USDA projects that utilization of both corn and soybeans will be somewhat lower in the year ahead. For the 1983/84 marketing year that begins in September, the USDA is forecasting that soybean exports will decline to 830 million bushels, down from the 900 million bushels estimated for the 1982/83 marketing year and down from 930 million bushels in 1981/82. Crushings of soybeans, however, are expected to hold near the 1.10 billion bushels estimated for the past year. Overall, total soybean use is pegged at 2.0 billion bushels, down about 3 percent.

The USDA's utilization estimates issued in conjunction with its August production estimates suggest that domestic corn utilization in the marketing year starting in October will decline 3.5 percent to 5.2 billion bushels. Corn exports, however, are expected to recover slightly after declining the past three years. For the 1983/84 marketing year, the USDA expects corn exports to reach 2.0 billion bushels, up from the revised estimate of 1.85 billion bushels for this year. Total utilization, estimated at 7.2 billion bushels for 1983/84, would be only nominally below that estimated for the current year.

With utilization of both corn and soybeans expected to exceed production, carryover stocks will be sharply reduced. For soybeans, carryover stocks next fall are expected to drop to 275 million bushels, down 40 percent from the record carryover of this year. Similarly, carryover stocks of corn next fall are currently projected to be trimmed to less than 1.5 billion bushels, nearly 60 percent less than this year. These reduced levels are not precariously low by historical standards and—especially for corn—still leave some cushion if the continuation of adverse weather leads to downward revisions in production estimates. Relative to the experience of the early-to-mid 1970s, a minimum carryover would represent about 550 million bushels of corn and 125 million bushels of soybeans. In any event, the sharp drawdown in carryover stocks will lead to prices well above year-ago levels for the next several months.

1983 corn and soybean production estimates for District States*

	Yield per acre		Production	
	Bushels	Percent change**	Million bushels	Percent change**
Corn				
Illinois	102	-24	816	-46
Indiana	92	-29	437	-46
Iowa	114	- 6	980	-38
Michigan	95	-13	176	-43
Wisconsin	103	- 5	247	-32
District States	104	-16	2,656	-42
United States	100	-13	5,237	-38
Soybeans				
Illinois	34	-13	303	-17
Indiana	33	-18	131	-28
Iowa	38	0	301	- 6
Michigan	30	- 3	27	-17
Wisconsin	31	0	12	-14
District States	35	- 8	773	-16
United States	30	- 6	1,843	-19

*USDA estimates on conditions of August 1.
**From year before.

As the effects of deteriorating crop conditions in the U.S. have become more apparent, farm prices have risen sharply. Based on its August estimates the USDA expects farm level prices of corn in the 1983/84 marketing year will average somewhere between $2.95 and $3.20 per bushel. The projected range is well above the $2.65 average for the current year and the $2.50 average for the 1981/82 marketing year, and it encompasses the previous record season average price of $3.11 in the 1980/81 marketing year. Similarly, soybean prices in the 1983/84 marketing year are expected to average somewhere between $6.50 and $8.00 per bushel. That compares with average soybean prices of $5.55 in the marketing year that ends this month, $6.00 in the 1981/82 marketing year, and the record-high season average price of $7.55 in 1980/81.For both corn and soybeans, the projected price ranges for the year ahead fall short of current prices. This is consistent with the historical experience that suggests prices tend to peak early in a marketing year following a crop shortfall.

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Selected agricultural economic developments

Subject	Unit	Latest period	Value	Percent change from Prior period	Percent change from Year ago
Farm finance					
Total deposits at agricultural banks†	1972-73=100	July	281	0	+11
Total loans at agricultural banks†	1972-73=100	July	294	+ 1.3	+ 6
Production credit associations					
Loans outstanding					
United States	mil. dol.	June	20,168	+ 1.8	- 8
Seventh District states	mil. dol.		N.A.	N.A.	N.A.
Loans made					
United States	mil. dol.	June	2,455	- 2.0	-14
Seventh District states	mil. dol.		N.A.	N.A.	N.A.
Federal land banks					
Loans outstanding					
United States	mil. dol.	June	47,828	+ 0.2	+ 3
Seventh District states	mil. dol.		N.A.	N.A.	N.A.
New money loaned					
United States	mil. dol.	June	313	- 5.9	-43
Seventh District states	mil. dol.		N.A.	N.A.	N.A.
Interest rates					
Feeder cattle loans††	percent	2nd Quarter	13.58	- 3.0	-21
Farm real estate loans††	percent	2nd Quarter	13.32	- 3.9	-20
Three-month Treasury bills	percent	8/11-8/17	9.43	+ 3.5	+ 9
Federal funds rate	percent	8/11-8/17	9.67	+ 2.5	- 4
Government bonds *(long-term)*	percent	8/11-8/17	11.78	+ 3.6	- 7
Agricultural trade					
Agricultural exports	mil. dol.	June	2,789	+ 4.1	-11
Agricultural imports	mil. dol.	June	1,265	-15.4	- 8
Farm machinery sales[p]					
Farm tractors	units	July	9,525	-35.1	- 4
Combines	units	July	1,008	+78.1	-30
Balers	units	July	2,267	+12.2	- 6

†Member banks in Seventh District having a large proportion of agricultural loans in towns of less than 15,000 population.

††Average of rates reported by District agricultural banks at beginning and end of quarter.

[p]Preliminary.

N.A. - Not available.

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