FRB CHICAGO

AGRICULTURAL LETTER

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Farm equipment sales sluggish

Sales of farm machinery and equipment turned lower last year and have continued at an unexpectedly slow rate so far this year. Reports from the Equipment Manufacturers Institute (EMI) show that the number of new tractors and combines sold to U.S. farmers through August of this year was off 18 percent from last year's pace and 24 percent below the level reached during the first eight months of 1990. The declines have been especially apparent for large tractors and combines. The weak sales stem from several factors that outweigh the inducements of lower interest rates and expanded acreage.

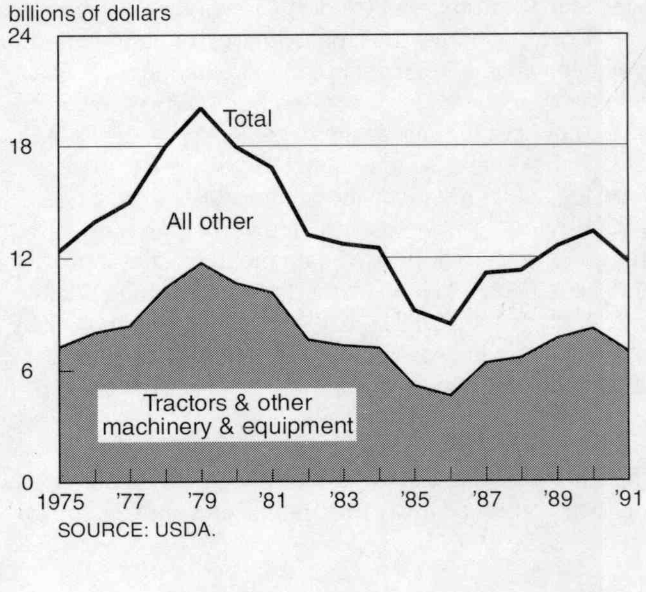
Annual farm machinery and equipment purchases vary considerably, but usually account for a sizable portion of annual capital expenditures in the farm sector. USDA estimates show that the all-time high of $11.7 billion in gross capital expenditures for farm machinery and equipment was set in 1979 as the boom conditions for agriculture of that decade drew to a close. The financial crises that hit the farm sector during the next several years pulled annual capital expenditures on farm machinery and equipment to a cyclical low of $4.6 billion in 1986. With the recovery of the late 1980s, the tally rebounded to the most recent high of $8.2 billion in 1990. But in conjunction with last year's downturn in unit sales of tractors and combines, capital expenditures on farm machinery and equipment retreated about 15 percent to less than $7.0 billion. Another large decline now seems probable for this year.

The sales figures reported by the EMI track the delivery of new tractors and combines to farmers through both sales and lease arrangements. The year-to-year decline in overall tractor and combine sales was comparatively modest in the first quarter (7 percent) and then ballooned to a decline of 32 percent in the second quarter. More recently, the gap has again narrowed, with unit sales for July and August showing a decline of only 3 percent. Throughout the year, however, combines and larger tractors have registered the biggest declines. New combines placed on farms through August of this year totaled less than 3,600 units, down almost 40 percent from last year's pace. Sales of tractors with 40 or more horsepower through August totaled nearly 34,400 units, down 15 percent. However, sales of four-wheel drive tractors (at nearly 1,600 units) were off 37 percent while sales for two-wheel drive tractors with 100 horsepower or more (at 9,500 units) were off 30 percent.

The downturn in tractor and combine sales is occurring despite lower interest rates, a slight increase in crop acreage, and prospects for a bumper harvest—factors which normally are associated with an increase in sales. But other factors continue to weigh on sales. The steepness of the second-quarter downturn may have been tied to the premature drought concerns that prevailed at that time. A more encompassing factor may be the retreat in farm sector earnings. (The latest USDA estimates show that net cash farm income fell 5 percent last year to $58 billion and is likely to edge down to somewhere between $54 and $57 billion this year). Farmers' recollections of the financial distress that gripped agriculture during much of the 1980s, their awareness of the shrinking safety net provided in federal farm price support programs, their concerns about the recent weakness in grain exports, and the uncertainties regarding future shipments—as amplified by the developments in Eastern Europe and the former Soviet Union and the stalled GATT negotiations—have undoubtedly contributed to the cautious spending pattern among farmers.

From a longer-term perspective, the continuing change in tillage practices also influences farm machinery and equipment sales. The move toward reduced-tillage was significantly rekindled in recent years as environmental concerns and federal legislation pushed many farmers into implementing conservation plans for their farms. The resulting focus on using crop residues to reduce water and

Gross capital expenditures in farm sector



SOURCE: USDA.

soil run-off is reflected in USDA studies on the distribution of crop acreage by method of tillage. Those studies show that in just three years—from 1988 to 1991—the share of corn acreage tilled by conventional systems in major corn-growing states declined from 80 percent to 70 percent while the residual share prepared by reduced-tillage practices rose from 20 percent to 30 percent. Similarly, the share of soybean acreage tilled with conventional practices in northern soybean-producing states declined from 83 percent in 1988 to 66 percent in 1991 while the share using reduced-tillage rose from 17 percent to 35 percent.

The shift in tillage practices can have a significant influence on tractor purchases. Reduced-tillage systems cut the number of trips over the field needed to prepare the seedbed. The USDA studies found that corn farmers using reduced-tillage practices averaged 1 to 2.5 trips across the field while those using conventional tillage practices averaged 3.5 to 4 trips. The fewer trips and the smaller power requirements for pulling most reduced-tillage equipment implies that tractors wear out more slowly than used to be the case. Moreover, when a worn-out tractor must be replaced, the shift toward reduced-tillage systems might permit some down-sizing in the horsepower requirements for the new tractor.

The tendency for combines continues to be toward larger, more sophisticated units. The economics of owning these more costly harvesting units require a larger acreage base than is found on the typical farm. Custom harvesting is probably becoming more common, reducing the number of operators who need to purchase or lease their own combine.

Gary L. Benjamin

Retail food prices

The rate of increase in retail food prices continued to ease during the first eight months of 1992. The year-over-year rise in the Consumer Price Index (CPI) for food averaged only 1 percent during the January through August period, well below the 4.5 percent rise for all other items. Price gains were recorded for processed fruits and vegetables, dairy products, fish and seafood, cereal and bakery products, and sweeteners. In contrast, lower average prices were logged for red meat and poultry, fats and oils, eggs, and fresh fruits and vegetables. However, prices for fresh fruits and vegetables posted sharp monthly gains in August and are expected to lend upward pressure to food prices over the remainder of the year. For all of 1992, the USDA anticipates the increase in food prices will average near 1 percent, down from the gain of 2.9 percent last year and the smallest rise in a quarter century.

The CPI for food is composed of a component representing food consumed away from home, and another component for food purchased in grocery stores and presumably consumed at home. The index for food consumed away from home accounts for about 38 percent of the weighting in the overall CPI for food. The price of food consumed away from home has increased at a fairly steady and moderate pace throughout the year, averaging 2 percent above year-earlier levels through August. In comparison, the index for food consumed at home averaged only nominally higher through August. However, the surge in fresh fruit and vegetable prices in August helped push the at-home component 1.5 percent higher than a year ago.

Meat prices were down, on average, during the first 8 months of 1992 as pork and poultry production displayed solid gains. Data through September 19 indicate that pork production has risen 9 percent over the year-earlier level. Seasonal increases in production this fall will continue to weigh on pork prices. For all of 1992, pork prices are expected to average about 6 percent lower. Although averaging 2 percent lower so far this year, retail poultry prices in August were up slightly from a year ago due to strong export demand, firm domestic consumption, and smaller gains in production. Paced by the gain from broilers, poultry production in the first half was up 6.5 percent from the year before. The gain for the second half, however, is projected to narrow to 3.5 percent.

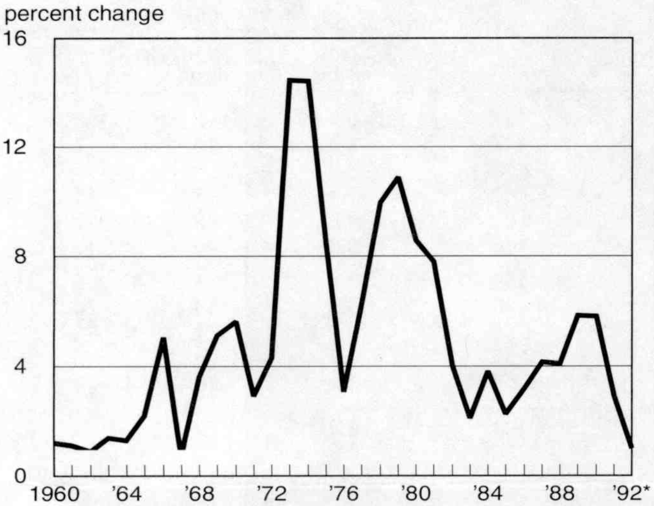
Retail beef and veal prices were down only slightly through August. Though first-quarter commercial beef production rose nearly 4 percent over the previous year, the second-quarter gain fell to less than one percent. USDA analysts expect beef production to fall slightly in the third quarter and remain flat in the fall. Though retail beef prices will continued to be pressured by competing supplies of pork and poultry, a seasonal decline in cattle slaughter near the end of the year may trigger some upward pressure on retail beef prices. Beef prices in August

Annual percentage change in retail food prices

	1990	1991	1992 forecast
All food	5.8	2.9	1.0
Food away from home	4.7	3.4	2.0
Food at home	6.5	2.6	0.5
Beef & veal	8.0	2.8	–0.5
Pork	14.7	3.3	–6.0
Poultry	–0.2	–0.8	–2.0
Fish & seafood	2.2	1.1	2.0
Eggs	4.7	–2.3	–10.5
Dairy products	9.4	–1.1	2.5
Fats & oils	4.2	4.3	–0.5
Fresh fruits	12.1	13.5	–5.5
Fresh vegetables	5.6	2.2	1.5
Processed fruits	8.7	–3.7	5.0
Processed vegetables	2.7	0.8	1.5
Cereal & bakery products	5.7	4.1	4.0
Sugar & sweets	4.4	3.7	3.0
Nonalcoholic beverages	2.0	0.5	0.0
Other prepared foods	4.5	4.5	2.5

SOURCE: Bureau of Labor Statistics; forecast by USDA.

Annual food price changes



*USDA forecast for 1992.
SOURCE: USDA and Bureau of Labor Statistics.

were nearly 1 percent below a year ago, and the USDA has projected little change, on average, for the year.

Dairy product prices averaged about 3 percent higher through August, mostly due to higher prices for raw milk. A reduction in cow numbers helped offset continued gains in milk per cow, holding the increase in production to a modest 2 percent for the 21 major milk-producing states. Increased sales of nonfat dry milk through the Dairy Export Incentive Program also contributed to higher prices. However, USDA figures indicate year-over-year production gains widened to 4 percent in both July and August, leading some analysts to suggest that any seasonal price strength occurring later this year may be offset by further production gains.

Retail egg prices fell steadily during the first half of 1992, averaging 13 percent below the previous year's level through August. Total egg production during both the spring and summer quarters exceeded that of a year ago by over 2 percent, and egg stocks at mid-year were up 50 percent from the year before. Second-half production gains will likely moderate, but annual production is expected to be the largest since 1988.

Fresh fruit prices averaged about 6 percent less through August as 1991-92 citrus production rose 9 percent over the year-earlier level. In particular, the California orange harvest jumped nearly 160 percent over the previous year's frost-damaged crop. Furthermore, recent USDA estimates indicate that non-citrus fruit such as apples, grapes, and pears registered production increases as well, although peach production was down 6 percent. Fresh vegetable prices rose sharply from January through April, then declined rapidly in May and June. Much of this volatility resulted from the movement of tomato prices, which posted a year-over-year gain of nearly 50 percent during the winter quarter before declining in the spring. Heavy winter rains reduced Mexico's exportable supply of tomatoes in early 1992, causing a temporary gap in U.S. imports. Despite this early volatility, fresh vegetable prices averaged 1 percent lower than a year ago for the first eight months of 1992.

Though the average levels for 1992 indicate moderating prices for fresh fruits and vegetables, their combined price index rose nearly 6 percent on a seasonally adjusted basis from July to August. According to USDA analysts, price gains for imported bananas and domestic lettuce played a key role in this increase. Banana imports were delayed due to labor disputes involving major U.S. suppliers, while lettuce prices were caught by a gap in supply as the harvest in the western U.S. wound down and the harvest in other regions was slow getting under way. More recently, Hurricane Andrew is reported to have destroyed the Florida lime crop, yet few orange groves were reported to have suffered damage.

Processed fruit prices averaged nearly 5 percent higher during the first eight months of 1992. This year's Florida orange harvest—which provides most of the oranges used for processing—was estimated to be 8 percent lower than the previous year's production. In contrast, retail prices of processed vegetables have been quite stable for several months. They posted a gain of less than 1 percent during 1991, and are expected to increase somewhat more than 1 percent for the current year.

In general, the prices of other food categories have posted year-over-year increases during the first eight months of 1992. The retail prices of cereal and bakery products averaged nearly 4 percent higher through August, while sugar and sweetener prices posted a year-over-year gain of 3 percent. Fish and seafood prices averaged about 3 percent higher and the prices of other prepared foods rose 2 percent. In contrast, the retail price of fats and oils was down nearly 2 percent through August, and nonalcoholic beverages have shown little change, on average, for 1992.

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Selected agricultural economic indicators

	Latest period	Value	Percent change from: Prior period	Year ago	Two years ago
Prices received by farmers *(index, 1977=100)*	August	137	−0.7	−6	−8
Crops *(index, 1977=100)*	August	114	−2.6	−14	−7
Corn *($ per bu.)*	August	2.13	−8.2	−9	−15
Hay *($ per ton)*	August	69.60	−3.1	−3	−14
Soybeans *($ per bu.)*	August	5.34	−4.5	−6	−11
Wheat *($ per bu.)*	August	2.88	−8.3	10	12
Livestock and products *(index, 1977=100)*	August	159	0.6	1	−9
Barrows and gilts *($ per cwt.)*	August	45.30	−0.4	−13	−20
Steers and heifers *($ per cwt.)*	August	74.50	0.8	4	−6
Milk *($ per cwt.)*	August	13.50	0.7	9	−5
Eggs *(¢ per doz.)*	August	53.4	2.1	−15	−19
Consumer prices *(index, 1982-84=100)*	August	141	0.3	3	7
Food	August	138	0.6	1	4
Production or stocks					
Corn stocks *(mil. bu.)*	June 1	2,739	N.A.	−8	−4
Soybean stocks *(mil. bu.)*	June 1	696	N.A.	−4	17
Wheat stocks *(mil. bu.)*	June 1	472	N.A.	−45	−12
Beef production *(bil. lb.)*	July	2.02	−1.1	1	4
Pork production *(bil. lb.)*	July	1.37	3.2	14	25
Milk production* *(bil. lb.)*	August	10.8	−1.5	4	3
Receipts from farm marketings *(mil. dol.)*	May	12,363	−10.7	−5	−4
Crops**	May	4,454	−18.7	−12	−10
Livestock	May	7,179	8.2	5	−2
Government payments	May	729	−57.6	−32	12
Agricultural exports *(mil. dol.)*	June	3,234	2.5	22	0
Corn *(mil. bu.)*	June	148	41.1	40	−27
Soybeans *(mil. bu.)*	June	27	−3.4	−25	−22
Wheat *(mil. bu.)*	June	78	21.6	19	−12
Farm machinery sales *(units)*					
Tractors, over 40 HP	August	3,284	−19.1	−2	−15
40 to 100 HP	August	2,474	−22.8	6	−9
100 HP or more	August	810	−5.6	−20	−28
Combines	August	596	12.0	5	18

N.A. Not applicable
*21 selected states.
**Includes net CCC loans.

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