OUTLOOK '85

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U.S. FARM MACHINERY OUTLOOK

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Domestic demand for farm machinery has been declining since 1980 and is expected to remain depressed in 1985. Financial conditions, which affect farmers' ability to assume additional long-term debt, continued to deteriorate in 1984 and are not expected to improve during the coming year. Record debt, declining cropland values, lower income, and declining export demand for U.S. commodities have reduced farm equity. Near-record high real interest rates have increased capital costs. These factors have increasingly made it more difficult for farmers to purchase new machinery in recent years.

Farm machinery inventories throughout the market system are at or near record levels in 1984. Domestic manufacturers drastically lowered production this year to bring retail supplies in line with demand. If demand does not rise during 1985, further production cutbacks could occur.

Demand

U.S. farmers are projected to purchase about $7.4 billion of farm machinery in 1984 (figure 1). Nominal expenditures for farm machinery have declined 37 percent since 1979 and have been at depressed levels during the past three years. With farm financial conditions not expected to improve next year, domestic demand for farm machinery in 1985 could drop slightly below 1984. Depending on interest rates, expenditures for farm machinery are projected to range from $7.3 to $7.8 billion in 1985.

Unit purchases in 1984 are projected to total 60,900 for over-40 horsepower (hp) two-wheel drive tractors and 3,700 for all four-wheel drive tractors (figures 2 and 3). These purchases are about 8 and 27 percent, respectively, below demand levels in 1983. Unit purchases of most grain and forage harvesting equipment also are projected to decline in 1984, totaling 10,000 for self-propelled combines, 8,200 for balers (producing under 200 pound bales), and 3,500 for forage harvesters (figure 4).

Domestic purchases in 1985 are forecast to range from 57,800 to 65,100 units for over-40 hp two-wheel drive tractors and from 3,500 to 5,000 units for all four-wheel drive tractors. Demand for combines and balers is not expected to improve appreciably in 1985, but purchases of forage harvesters should total 3,300 to 4,400 units.

For the past several years, U.S. farmers have steadily been buying fewer and smaller-powered tractors. Since 1979, when farm machinery expenditures were record-high, total power takeoff capacity for over-40 hp tractor purchases declined from 15.3 million hp to 6.6 million hp in 1984. The weighted average per-unit capacity for these purchases also has steadily declined from a high of about 111 hp in both 1980 and 1981 to 102 hp in 1984. Given current financial projections, farmers are expected to continue to purchase smaller-powered tractors in the near future.

Financial Conditions

The current situation affecting the financial well-being of the agricultural community is characterized by increased interdependency with national and international economic conditions. The effect of the U.S. monetary and fiscal environment on interest and inflation rates and their impact on the value of the dollar ultimately influence farm equity, capital costs, and export demand for U.S. commodities. These factors, in turn, determine the level of demand for farm machinery.

The 1970's were characterized by relatively favorable financial conditions on the farm and dramatic increases in export demand for U.S. commodities, as cropland values (equity) rose sharply, real interest rates fell to low or negative levels, and the value of the dollar steadily declined. Farmers responded to these conditions by increasing the size of their operations and purchasing additional, higher-powered farm machinery.

The current monetary and fiscal environment, starting in 1979, has caused real interest rates to rise sharply, leading to a record-high dollar value relative to foreign currencies in 1984. Because of these changes and depressed world economic conditions, total farm debt has increased to record levels, cropland values have steadily fallen, and export demand for U.S. commodities has declined.

Current projections call for little or no improvement during 1985 in factors that affect the ability of U.S. farmers to assume additional long-term debt. The real after-tax PCA interest rate in 1985 is projected to average between 4.5 and 6 percent, with a high probability it will tend toward the upper value (figure 5). Real commercial rates also are forecast to fall in this range. As a result, capital costs for farmers will remain high next year. Higher interest rates not only reduce demand for farm machinery but also increase operating costs. Consequently, real interest expenses as a share of real total production expenses increased from 12.6 percent in 1980 to 15.8 percent in 1984.

The debt-asset ratio for January 1, 1985, is forecast to increase slightly from the January 1, 1984 estimate of 20.8 (figure 6). The ratio is expected to rise primarily because of continued high total farm debt and further declines in the value of farm real estate, which comprises about 75 percent of total farm assets. Real total farm debt dropped to $96.1 billion in 1984 from a record $100.5 billion in 1983. The real value of farm real estate totaled $342.2 billion in 1984, declining for the third straight year. The upward trend in the debt-asset ratio reflects continued deterioration in the financial condition of the farm sector.

Although farm income estimates are not available for 1985, income levels projected for 1984 portray a mixed picture. Real net farm income is expected to increase from a drought- and PIK-depressed $7.5 billion in 1983 to between $13 and $15 billion in 1984 (figure 7). Demand for farm machinery in 1984, however, was not affected significantly by this increase. Total real net cash income, on the other hand, is forecast to fall from $18.6 billion in 1983 to $16.2 billion in 1984 as increases in production expenses exceed gains in gross cash receipts. For many farmers with increased cash flow this year and in 1985, funds likely will be used to reduce existing debt rather than to purchase new farm machinery.

The real trade-weighted dollar exchange rate for all crops is forecast to decline slightly in 1985 from the current 1984 estimate of 100 (figure 8). But, with the value of the dollar expected to remain near historically high levels, commodity costs to overseas customers will be high, which will discourage export sales. Without increases in export demand, cropland values and cash income more than likely will not rise.

Little or no improvement is projected in the financial situation of the farm sector during 1985. Therefore, demand for farm machinery is expected to remain depressed. Depending on interest rates, nominal expenditures for farm machinery are forecast to total $7.3 to $7.8 billion in 1985. It is important to remember that financial conditions for many farmers deteriorated over an extended period. Significant improvement in these conditions likewise will take several years.

Supply

Retail supplies of all farm machinery items are expected to be excessive during 1985. The current farm machinery supply situation reflects the prolonged effects of growing inventories and declining demand. Although the industry has recently responded to this condition by drastically cutting production, continued reductions in demand have caused inventory-to-purchase ratios to rise significantly. Until demand increases or manufacturers sufficiently reduce production to where it is more in line with demand, supplies of farm machinery will remain large.

Farm machinery indices for September 30 inventories to January-September purchases between 1978 and 1984 exemplify the excessive supply situation facing the farm machinery industry. The ratio for over-40 hp two-wheel drive tractors more than doubled from 65 in 1979 to 137 in 1984 (figure 9). The ratio for all four-wheel drive tractors improved from 137 in 1983 to 130 in 1984, but is still far above the 1979 ratio of 79. Inventory-to-purchase ratios for major grain and forage harvest equipment items also are trending upward. In particular, the ratio for self-propelled combines rose from 118 in 1981 to 209 in 1984 (figure 10). Ratios for balers and forage harvesters have been more stable than for combines, but still reflect large supplies.

Farm machinery dealers are offering attractive sales incentives to encourage farmers to purchase new farm machinery. These incentives include price discounts, cash rebates, fixed finance rates below current commercial rates, delayed financing, deferred payments, and variable maturity periods. Another attractive incentive currently offered by many firms is multi-year warranty coverage for new machinery purchases. Sales incentives, however, have not encouraged farmers with substantial debt or cashflow problems to purchase new machinery. Without lower interest rates, continued improvement in the world economy, and a more competitive dollar for a sustained period, it is unlikely that demand for farm machinery will increase.

Industry Profile

The U.S. farm machinery industry faces unprecedented financial problems as demand for its products has fallen for the fifth consecutive year and is expected to remain depressed in 1985. Economic conditions since 1980 have taken many farmers totally out of the market for new farm machinery. For these farmers, the holding of currently-owned machinery for a longer time, machinery leasing, and purchases of used machinery are the only affordable means of satisfying their machinery needs.

Also, unlike other inputs (e.g. fertilizer, pesticides, and seed) that are relatively price inelastic at the farm demand level and are usually purchased with short-term capital, most farm machinery purchases are financed for more than 3 years. Because of different demand criteria for inputs and existing economic conditions, which are not allowing many farmers to assume additional long-term debt, the farm machinery industry is more vulnerable to general economic conditions affecting agriculture than are other farm input industries.

In response to the current situation, domestic farm machinery manufacturers are taking short- and long-term steps to reduce operating costs and overhead. As gross receipts have declined for most machinery manufacturers, efforts to reduce costs and lower breakeven points have allowed them to remain in operation. Still, the major problem threatening the financial well-being of most full-line firms is manufacturing capacity that far exceeds any foreseeable market demand.

Recent production levels showed domestic farm machinery firms operating between 25 and 30 percent of capacity. Even at these low levels, many firms continued to reduce output during fourth-quarter 1984. Production in some plants is not expected to resume next year until demand reduces excess inventories.

Although production cuts are the primary cost-reducing strategy for most domestic firms, other steps include contractual arrangements with overseas subsidiaries and independent manufacturers to produce all or portions of some farm machinery items, scaled down product lines, and personnel reductions through early-retirement incentives.

Faced with a continued depressed market for farm machinery in 1985, some independent firms and parent companies have decided to concentrate long-term efforts in other markets. Yet, other firms have announced plans to market new tractors. Given excessive machinery inventories, lower production levels, and projected depressed demand in 1985, some firms may permanently consolidate production in a dramatic fashion or drop out of the market altogether.

FIGURE 1--FARM MACHINERY EXPENDITURES

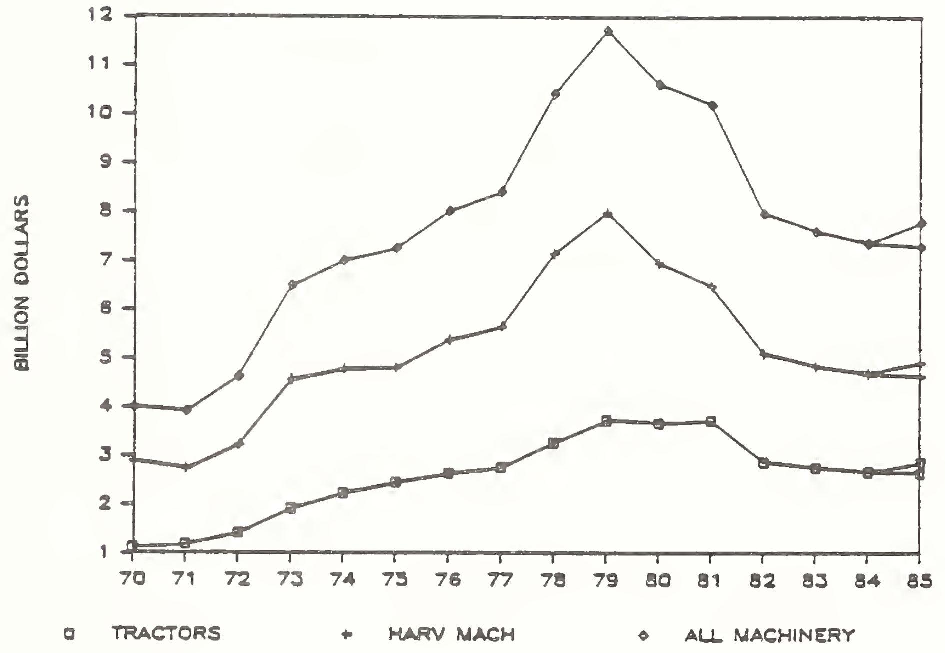

FIGURE 2--DOMESTIC PURCHASES

OVER-40 HP 2WD TRACTORS

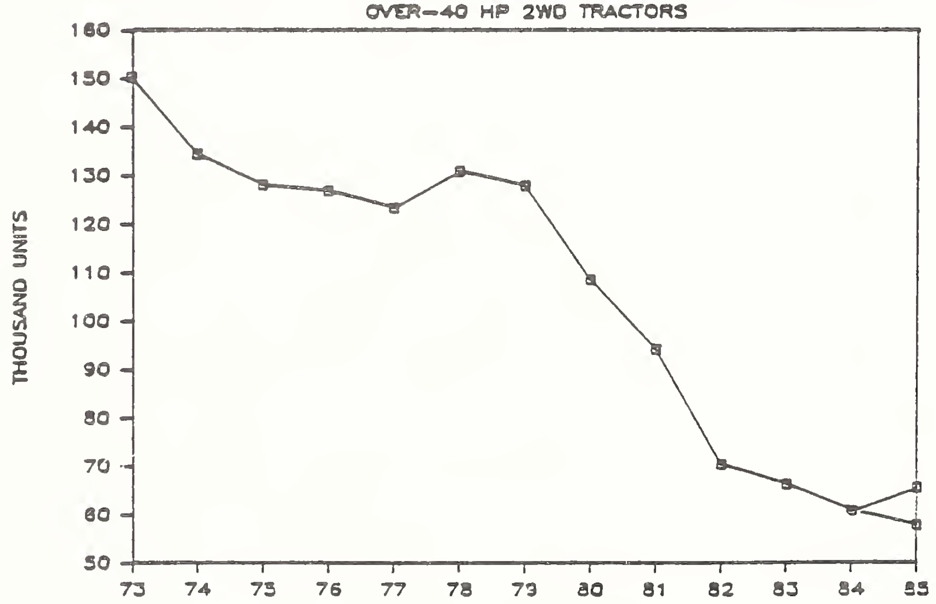

FIGURE 3--DOMESTIC PURCHASES

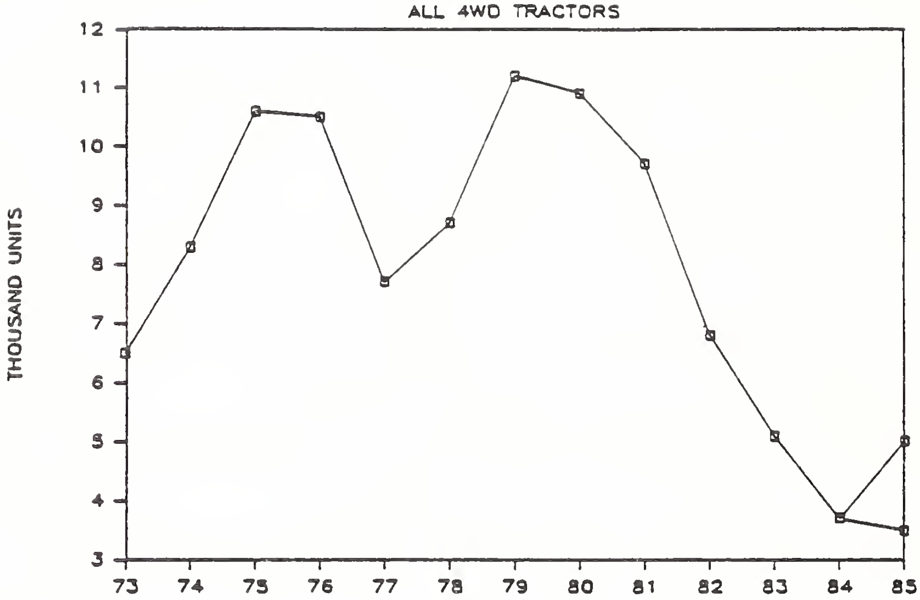

FIGURE 4--DOMESTIC PURCHASES

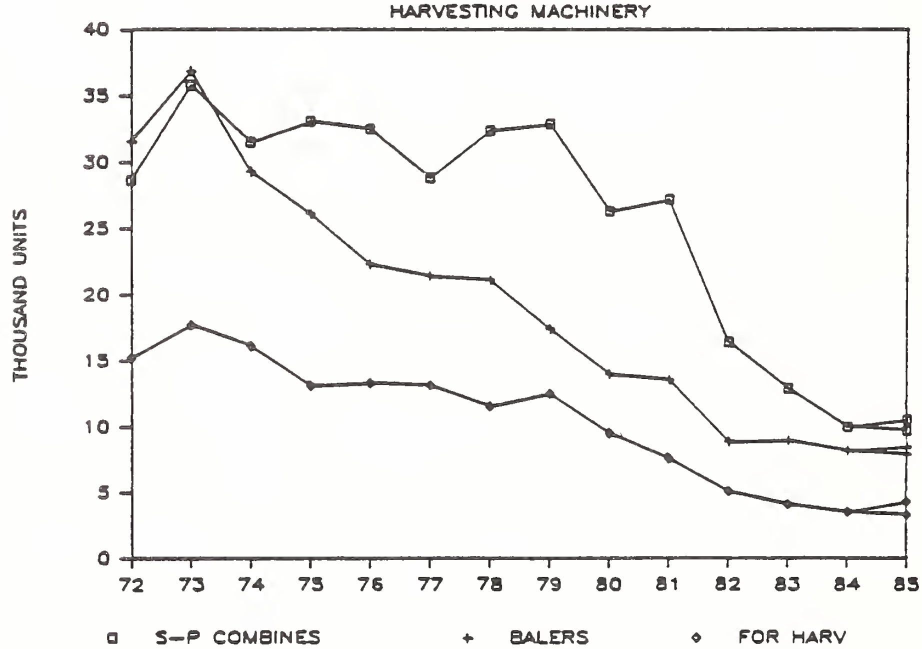

FIGURE 5--PCA INTEREST RATE

REAL, AFTER-TAX

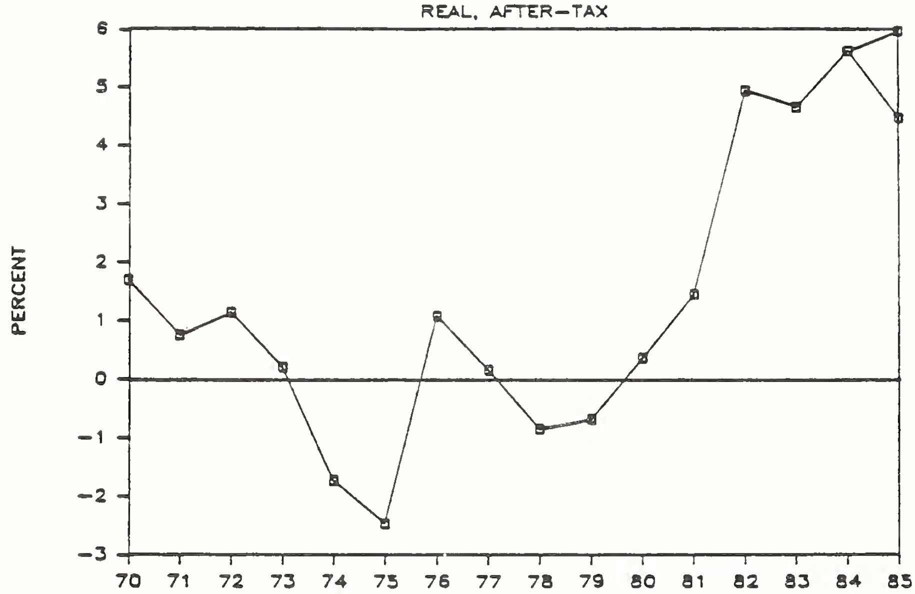

FIGURE 6--DEBT-ASSET RATIO

FOR ALL FARMERS

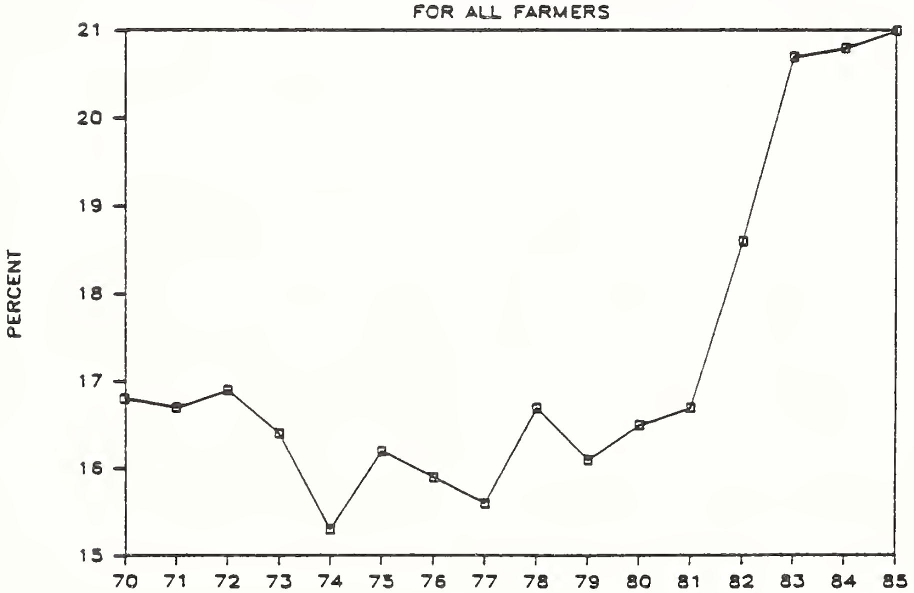

FIGURE 7--REAL FARM INCOME
(1972 DOLLARS)

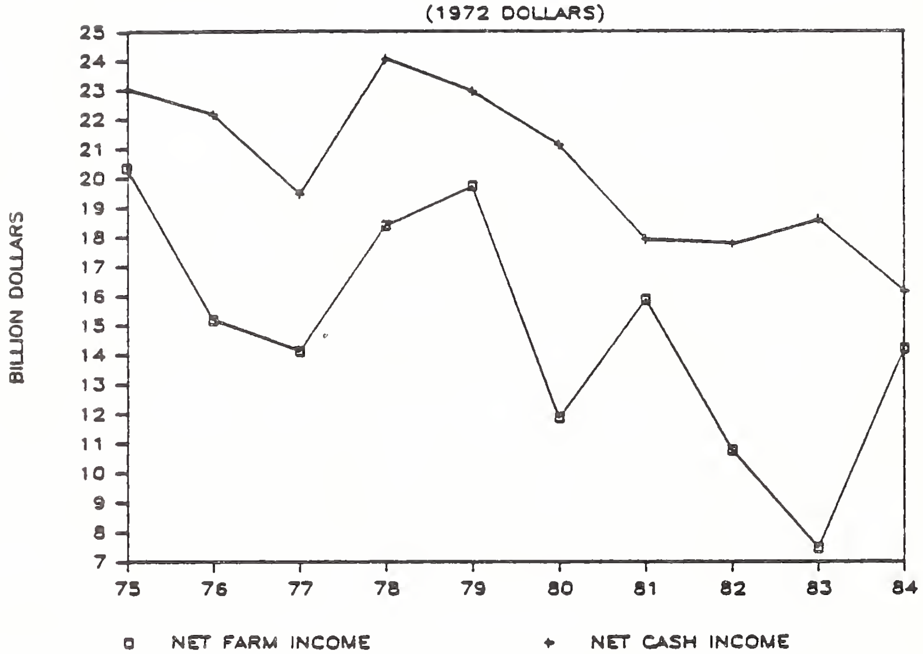

FIGURE 8--TRADE-WEIGHTED EXCHANGE RATE
FOR ALL CROPS

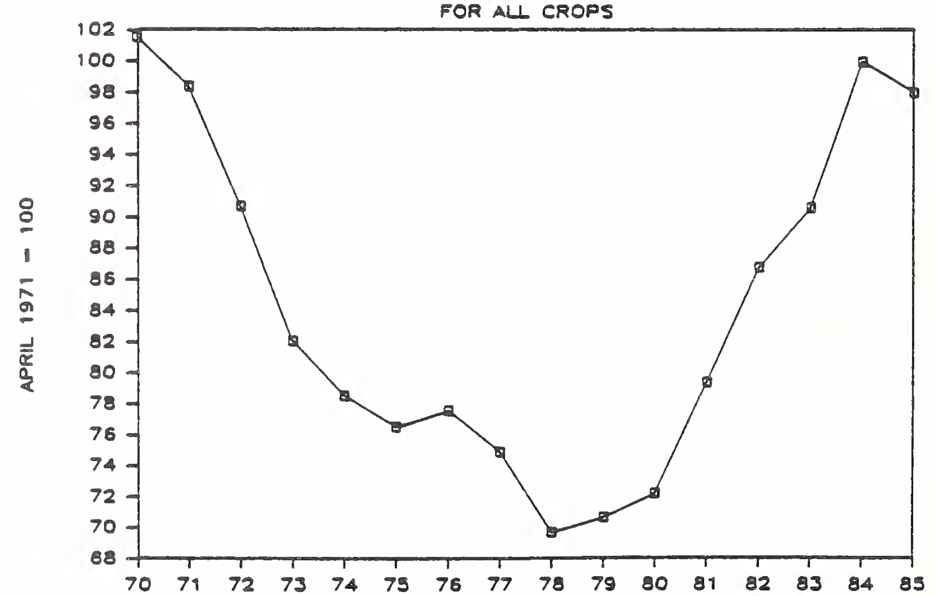

FIGURE 9--INVENTORY TO PURCHASE RATIOS

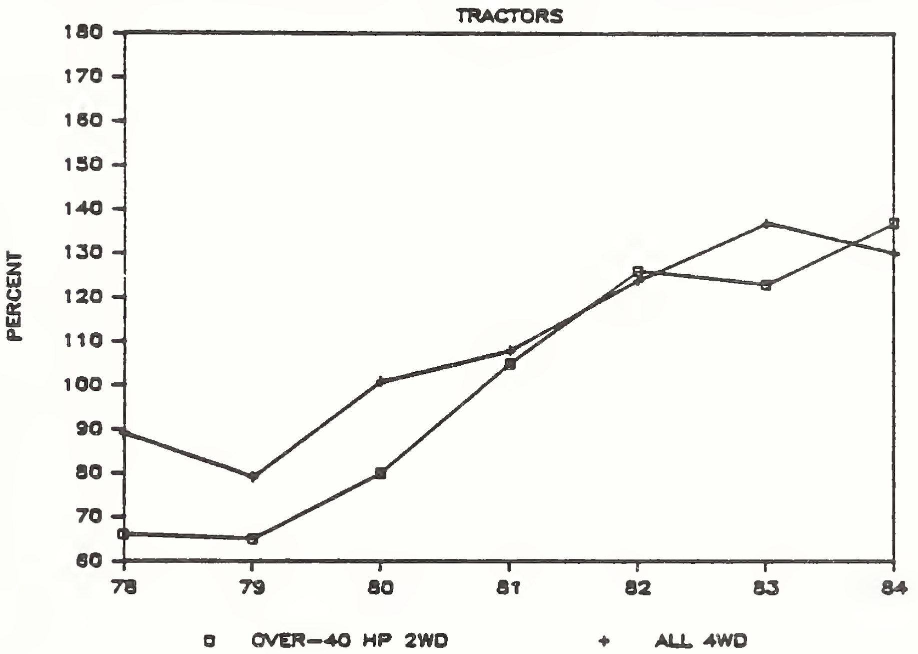

FIGURE 10--INVENTORY TO PURCHASE RATIOS