ECONOMIC OUTLOOK FOR FARM HOUSEHOLDS AND THEIR FARMING ESTABLISHMENTS

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Introduction

In 2003, incomes of farm operator households will return to the upward trend that has largely been the norm during the last decade. Our assessment of data available to date indicates that household incomes were, on average, about 2 percent lower in 2002 than in the previous year. If survey data now being collected bear out this preliminary indication, 2002 would be the first year-over-year decrease in income at the household level since 2000, only second in a decade. Then, as in 2002, the decrease in household income was driven by a reduction in earnings from farming that could not be offset by earnings from off-farm sources. Loss of income from farming last year was due largely to significant reductions in livestock receipts, timing of government payments received, and weather related problems that affected production in many areas of the country.

Household income levels are expected to rebound in 2003 with both incomes from farming and from off-farm sources contributing to the 4-percent increase projected for the year. In a reversal from 2002, increases in crop receipts, livestock receipts, and government payments are all expected to contribute to higher levels of farm earnings this year. Looking ahead and taking into account USDA's expected crop and livestock market developments, we anticipate household incomes to again follow a modest, but increasing trend during the next 3 to 5 years. Increased incomes earned in both farm and non-farm economic activities are expected to contribute to improvement in household income.

USDA expects the financial picture to look promising for most farmers and ranchers in 2003. The assessment is for market receipts, government payments and production expenses to translate into an increased contribution of value-added to the U.S. economy, totaling $90.8 billion in 2003 a level that resembles the contribution in 2000 and 2001. After accounting for payments to a variety of resource owners, such as landowners and creditors, income to farm owners and operators (or business profits), will total $44.9 billion, an amount near the previous 10-year average of $45.4 billion.

Looking ahead we expect both crop and livestock receipts to exhibit a steady growth pattern only in the upcoming 3 to 5 years. Livestock receipts will, in particular, bounce back from the low levels experienced last year, reaching and exceeding the $106 billion level attained in 2001. Improvements in receipts will increase gross income and boost support to net cash income and farm profits. Net cash income is expected to total $51 billion before settling in the $54 billion range. Net farm income is expected to remain in the low- to mid-$40 billion range during the next 3 to 5 years.

Taking into account both changes expected in household earnings and changes expected in asset values, particularly business assets owned by farm families, USDA expects farm households to be in an improved economic position in 2003. Fewer households will have low income and low levels of net worth in comparison to all U.S. households. With both farm business profits and cash flow increasing and business asset values, particularly land, continuing to rise. More households will also have both higher incomes and wealth than in 2002.

Financial performance will vary greatly among businesses and regions in 2003. Across all farms, business net cash income and net farm income are expected to rise by nearly 12 percent in 2003. Increases in gross incomes, driven by improved crop receipts, livestock receipts, government payments, and earnings from related activities such as machine hire and custom work, will be more than enough to overcome higher expenditures for inputs bought from other sectors of the economy.

Improvements in farm sector "terms of trade" will not be evenly shared among households that operate commercial-size farms, those that operate intermediate size businesses, and those that maintain farms as rural residences. In absolute terms the largest increase ($9,700 per farm) in cash incomes will be for the 243,000 commercial-size farms, bringing net cash income up to $131,000 per farm. This is still below the $148,000 earned in 2001, and below the $155,000 to $175,000 expected over the next 3 to 5-year. In percentage terms, the largest increase will likely be for households that operate intermediate-size farms in 2003, at 16 percent. In contrast to commercial-size farms, net incomes of intermediate size farms will likely remain near their 2001 level in the next 3 to 5 years. The 660,000 households that operate intermediate-size farm businesses will look to earnings from their off-farm employment and business activities to underpin household expenditure decisions. The 1.3 million households that operate rural resident farms will on average continue to generate negative cash earnings from their farm operations, leaving these households to also look to off-farm earnings to support their households.

Performance prospects will differ among farms depending upon the choice of crop and livestock enterprise, government payments as a source of farm revenue, and the relative importance of expense items. Overall we expect incomes to increase most for wheat, soybean, and mixed grain operations. Livestock operations, other than dairy, will also see improved income prospects, but to a lesser extent than most crop farms. We expect to see the incomes of dairy farms continue to erode in 2003. Given that households that operate dairies focus most of their effort on farm activities, incomes of these households will also be reduced further this year. Households in the Northern Great Plains and Prairie Gateway will see most improvement in income from farming.

Income from Farming

The financial picture looks promising in 2003 for most farmers and ranchers. Even though some producers are still feeling pressure from drought conditions, the cattle market continues to be bolstered by strong demand and dwindling beef supplies. Farm prices for pork and poultry are also expected to rebound in 2003. Dairy farms, on the other hand, should experience a continuation of the less favorable conditions that prevailed during 2002, when milk prices reached a 20-year low. Overall, the value of livestock production is forecast to increase by $3 billion from 2002, but remain below 2001's record level. Expanding acreage and a return to trend yields should help bolster crop production in 2003. Wheat and oilseed receipts are expected to show the strongest gains, while the outlook for cotton and rice is also encouraging. Corn and tobacco receipts are forecast below 2001 levels. Total 2003 crop receipts are forecast at $101.6 billion, the highest level in 5 years.

The pace of sign-up of the new farm act is having a major impact on farm income in both 2002 and 2003. Earlier expectations of program implementation were not realized in 2002, as signups have been much slower than anticipated. As a result, farmers will receive much of the 2002 direct and counter-cyclical payments in calendar year 2003. In 2003, total production expenses are forecast to rise $7.5 billion (3.8 percent), the largest increase since 1997, but similar to the increase in 2001. The initial expectations for 2003 suggest a general rise of between 4 and 6 percent across a wide range of inputs. The largest increase forecast is a 9-percent rise in fertilizer expenses, due primarily to higher prices. The only expense that will fall in 2003 will be interest, with little, if any change anticipated in farm loan interest rates.

The outlook for commodity market receipts, production expenses, and government payments translates into a net value added to the U.S. economy in 2003 that resembles the level attained in 2001, after falling more than $14 billion in 2002. Net value added is a measure of the income earned by those contributing resources to agricultural production. The major stakeholders, which include hired labor, nonoperator landlords, and agricultural lenders, are expected to receive nearly $46 billion as a return on their contribution to production agriculture. What remains, $44.9 billion, is referred to as net farm income and represents the farm operators' share of income from the sectors' production activities. At this level, net farm income would be near the previous 10-year average of $45.4 billion. Net cash income, unlike net farm income, does not include the value of home consumption, changes in inventories, capital replacement, and implicit rent and expenses related to the farm operator's dwelling—none of which reflect cash transactions during the current year. Net cash income represents funds that are available to farm operators to meet family living expenses and make debt payments. The 2003 forecast shows a $5 billion increase in net cash income from 2002, to $51.3 billion, but remaining below 2001s' value of $59.7 billion.

Projected changes in net cash income vary widely by size of farming operation in 2003. The 60 percent of U.S. farms classified as rural residences typically rely on off-farm income for meeting household financial needs. The small farming operations of these households reported negative net cash income in 2001, and are likely to experience about the same losses from farming in 2002 and 2003. Commercial farms, which depend much more on farming as a source of household income, are expected to see higher incomes on average in 2003. Yet, when compared with 2002, intermediate farms have the largest relative increase in net cash income for 2003 (figure 1).

There are three distinct income patterns over 2002-2003 for farm businesses that specialize in crop production (figure 2). The most favorable outcome, where income declined in 2002, but rebounds to levels higher than occurred in 2001, is forecast for specialty crops, wheat, soybeans, and other field crops. The most substantial gains are expected for wheat farms. The average income of specialty crop producers was similar in both 2001 and 2002 and could increase by 6 percent in 2003. General cash grain and corn farms experienced similar declines in average income for 2002 and are expected to recover to 2001 levels in 2003. Tobacco, cotton, and peanut producers are forecast to experience the least favorable outcome, with income increasing in 2003, but remaining below 2001 levels.

Among livestock farms, producers that specialize in dairy and hogs have the least favorable income outlook (figure 3). The combination of both lower receipts and higher expenses will cause average income of dairy farms to decline in both 2002 and 2003. Average net cash income of hog farms is expected to increase in 2003, but remain below levels of 2001. After declining in 2001, average incomes of beef and poultry producers are expected to recover to near 2001 levels in 2003.

Changes in income among geographic locations will mirror the location of farm types and the mix of commodities produced. Most regions are expected to see an increase in average net cash income for 2003 (figure 4), but the amount of improvement is not expected to reach income levels observed in 2001. In relative terms, some of the regions in this group such as the Prairie Gateway and Mississippi Portal, are expected to have the largest gains in 2003 income (33 and 23 percent, respectively). The forecast increases in average net cash income for 2003 in the Northern Great Plains and Southern Seaboard are nearly enough to return to 2001 levels.

Livelihood Choices of Farm Households

The farm level surveys of USDA (Agricultural Resource Management Survey, ARMS) have documented the wide array of stakeholders that provide inputs and services used by farms and earn a share of output. Many of these stakeholders are easily recognized. Landlords, creditors, farm partners, and shareholders in farm corporations come to mind. While it is recognized that agriculture's contribution to the national economy is shared among a variety of resource owners or stakeholders, it is less well understood what this output sharing means to the incomes and economic welfare of farm households. Based on reported rental practices, use of debt, and hired labor, we estimate that 44 percent of farm value-added was paid to these resource owners in 2001. Contractors and non-family corporations account for another quarter. The most widely recognized group of stakeholders, farmers and their households, earned about 33 percent of the value that farming contributed to the national economy in 2001. Because so many parties share income from farming it is no longer easy to draw conclusions about what national estimates of farm income or value-added mean for income that farmers earn from farm self-employment.

That farm income is just one component of the total income of farm households has also been documented by USDA's farm level surveys. Mimicking the general economy, dual career farm families are the norm, rather than the exception. Fifty-four percent of farm operators work off the farm. A majority of spouses are also employed off farm. Only recently, USDA has begun to document whether off farm work by operators and members of their households is a career choice or an action needed to support the farm business. In addition, USDA has also begun to obtain information about the timing of the farm-to-work or work-to-farm decisions made by the household.

Farmers or members of their households have traditionally been viewed as needing to work off farm to support the business. But this is not how a large share of respondents reply to survey questions regarding occupation. In 2001, 46 percent of operators and 52 percent of spouses reported a principal occupation other than farming. When asked, most respondents who reported a principal occupation other than farming indicated that their non-farm occupation was a career choice. Additionally, a third of operators and spouses reported off-farm work prior to the decision to operate a farm business. The 956,000 operators and 500,000 spouses who hold a principal occupation off-farm underscore the importance of the non-farm economy to the economic welfare of farm households and cements the realization that there is no one standard model of how farm households earn a livelihood (figure 5).

Livelihood choices of farm households stem from decisions about how to allocate labor, managerial and entrepreneurial resources, and financial assets. In only 14 percent of households does the operator declare farming the primary occupation with no member working off farm (figure 6). By far, the most common choice of farm households involves the combination of an off farm principal occupation with farm self-employment. Forty-one percent of farm households report combining work for wage or salary and farming. Another five percent report a combination of off-farm self-employment and farming. These households tend to operate smaller farm businesses, as measured by value of production or acres operated. Households who combine a farming principal occupation with off-farm work operate larger farm businesses (figure 7). Work for wages or salaries is the most common choice, with either the spouse or both the spouse and operator working off the farm in 80 percent of households. Even though working off farm, these households still manage to operate farm businesses nearly as large as those managed by households with no off-farm work. The largest farms are managed by operators that combine a farming principal occupation with non-farm self-employment. These farmers are taking advantage of managerial and entrepreneurial skills to diversify business interests among multiple sectors of the economy. Our analysis of survey responses indicate that the common circumstance is not that operator households engage in some type of non-farm employment or entrepreneurial activity, but rather that households which choose to focus their efforts entirely on their farm business are in a distinct minority. Only one in seven households choose to work only on the farm.

Livelihood choices vary across regions, with farm and non-farm occupations carrying different levels of emphasis. Households with operators having farming occupation with no off-farm work are distributed among regions on a relatively proportional basis. While 26 percent of all farms are managed by an operator 65 or older, 58 percent of farms where the household have no-off-farm work are managed by an operator 65 or older who relies on farming as sole source of income. Over three-fourths of farms were managed by an operators over 55 years. Operators of these farms have also, on average, been in business much longer than operators in other household types. Households, which combine farming principal occupation with wage or salary employment, have a greater-than-proportional presence in the Heartland and Northern Great Plains. Combining off-farm occupation with farming occurs on a relatively more frequent basis in the Eastern Uplands and Southern Seaboard regions.

Choice of commodity focus differs among the household types, along with who works on or off the farm. The amount of time devoted to farm and off-farm tasks varies significantly depending upon work choices. As expected, beef cattle is the most common commodity emphasis among households with a retired operator. But beef is also the most common farm type among all households. In households where there is no off-farm work, there is a proportional share of grain operations but relatively more dairy, specialty crop, hog and poultry operations. Households with an off-farm work emphasis are relatively more focused on grain, oilseed, and field crops. In households which report off-farm work for wages, about half of operators work off-farm. This share rises to 96 percent with households having a non-farm primary occupation. A majority of spouses work off-farm in either case. Operators in both household types report working 3,000 total hours or more. The difference arises in the amount devoted to off-farm work: about 1,300 hours if there is a farming operation, and 2,100 hours if the emphasis is on off-farm work. There is not a lot of difference in the amounts and distribution of spouse hours of work, regardless of the operator's primary occupation. Spouses tend to work around 2,100 hours, and spend nearly 80 percent of those hours off the farm.

Income from Nonfarm Activities of Farm Households

Farm household income originates from both farm and nonfarm sources (figure 8). Nonfarm income includes income from off-farm businesses, wages and salaries, interest and dividends, and sources such as Social Security and pensions. While off-farm wages predominate, income from another business—such as a machinery repair shop, seed agency, or insurance agency—can also shore up farm household income. Income from interest and dividends includes the interest income from savings and investment accounts. Dividends earned by households are from investments in equities such as stocks or mutual funds. Additional sources of nonfarm income include pensions, annuities, military retirement, unemployment, Social Security, veterans' benefits, other public retirement and public assistance programs, and rental income from nonfarm properties.

The composition of farm household income has remained reasonably stable in recent years (figure 9). For example, the share accounted for by nonfarm income increased only three percentage points from

1993 (88 percent) to 2001 (91 percent). The contribution of wages and salaries increased from 46 percent to 51 percent over this period. The share of household income from the farm business decreased by 2 percentage points, remaining (less than 10 percent) of average household income. However, the share of household income from farming increases with farm size, ranging from 50 percent of total household income for higher sales small farms to 60 percent for large family farms and 82 percent for very large family farms. Even households associated with commercial farms earn substantial off-farm income (25 percent in 2001). Households operating small (rural residence) farms often have a loss from the farm business and rely on nonfarm sources for virtually all income.

The share of off-farm income in total farm household income depends on the location of the farm (figure 10). For example, farms located near metro areas have a higher proportion of their total income from off-farm sources. These farm households operate small farms (mainly residential farms) and operators have a higher level of education. Further, unearned income contributes significantly to the household income of retired farmers.

Average farm household income for 2003 is forecast at $65,095 per household, up four percent from last year. Increases in crop and livestock receipts and government payments are causing the farm income component to recover from year-ago lows. Although the general economy is strengthening, labor markets tend to trail the general economy during periods of recovery. Thus, we expect only a modest increase in farm household income from off-farm sources. Farm households that rely more heavily on the farm for income will realize the largest recovery in household income (figure 11). Farm operators of commercial farms are expected to realize the largest increases in household income with a 14 percent increase in income from the farm. A five percent increase is expected in household income on intermediate farms. Operator household income on rural residential farms will increase about three percent, largely from off-farm sources.

Wealth Levels of Farm Households

Limiting discussion of farm assets and debt to the farm sector masks the wide variation in financial conditions of farm operator households. Farm households are likely to experience financial stress when debt levels become burdensome. Debt repayment does not pose a problem for the 58 percent of operator households that reported owing no farm debt. The extent of debt exposure varied widely across farm classes, with farm debt balances reported by about one-third of rural residency farms, less than half of intermediate farms, and more than three-fourths of commercial farms.

Even with several years of generally weak commodity prices, owning a farming operation has still been an important wealth-building tool for many farm operator households. The average value of farm assets on family farms is expected to approach $567,000 in 2003, and, with reported farm debt of less than $70,000, the calculated average net worth of family farm businesses is expected to approach $497,000.

Analysis of ARMS data using ERS' farm typology classification system illustrates the diversity among family farms. About 9 percent of all family farms are classified as *commercial farms*, reporting sales greater than $250,000. These large operations efficiently manage a substantial asset base, and are expected to generate about $132,000 in 2003 net cash income on an owned asset base valued at almost $2,000,000. These farms are expected to have an average farm net worth of more than $1.5 million, with an additional $100,000 in nonfarm net worth. Commercial farms generate sizeable cash flows, and advantageously use credit to enhance returns.

While intermediate and rural residence farm households rely on off-farm sources for the bulk of their income, the farm asset and net worth bases of these households account for much of their accumulated wealth.

Intermediate farms, those with sales less than $250,000 and farming as the operator's primary occupation, account for 31 percent of all family farms. These farms are expected to generate, on average, net cash income of less than $12,000 in 2003. Despite low returns to farming, these farms own farm assets valued at about $640,000, on average, and reported farm net worth of $578,000. Nonfarm wealth is expected to boost household net worth to almost $675,000 per farm.

About 66 percent of family farms are *rural residences*, which may not necessarily view farm operations as profit centers. The residential nature of these operations is evidenced by the relative importance of the operator dwelling, which accounts for almost one-fourth of the total value of farm assets. Traditional farm financial performance measures are not very useful in assessing the financial condition of rural residences, since their financial well-being is more closely tied to off-farm employment conditions in the rural economy than to profitability of their farming operations. While farming activities on rural residence farms generate negative net cash income, on average, these operations own farm assets expected to be valued at almost $320,000 in 2003. With expected farm debt of less than $30,000, rural residence farms are anticipated to have average farm net worth of $290,000. Coupled with another $100,000 in nonfarm net worth in 2003, these farm households total net worth is projected to approach $390,000.

Farm assets account for a large share of total operator household assets for all farm types. As might be expected, farm assets are 94 percent of reported household assets for commercial farms, and 86 percent of assets for intermediate farms. Farm assets, including the operator dwelling, represent almost 70 percent of total assets in rural residence households. Even if the dwelling is considered a nonfarm asset for rural residence households, farm assets would still represent 53 percent of total assets.

Economic Well-Being of Farm Households

Traditionally, assessments of farm household economic well-being have had a singular focus: determining how income levels of farm households compared with incomes of nonfarm households. A recent ERS (USDA) study shows that farm household economic well-being is affected both by the level of income and the amount of wealth (potential access to income) available to the household and by how income and wealth influence household consumption. Analysis of farmers' responses to the 2001 ARMS survey suggests that, on average, farm households have higher incomes, greater wealth, and lower consumption expenditures than do other U.S. households. Since average comparisons can be misleading, farms were divided into four groups using income and wealth levels relative to the median U.S. households: (1) lower income-lower wealth; (2) lower income-higher wealth; (3) higher income-lower wealth; and (4) higher income-higher wealth (figure 12). In 2003 almost 46 percent of farm households are projected to have *higher incomes and greater wealth* relative to an average U.S. household. The vast majority of these farms (96 percent) have household income greater than consumption expenditures. Additionally, this group of higher income-higher wealth households includes a disproportionate share of larger farm operations and farm operators who reported a primary occupation other than farming and have the highest educational attainment.

It is projected that only 5 percent of farm households will be in the *higher incomes and lower wealth* group in 2003. These households are almost entirely focused on off-farm activities. Younger than average, with more having attended or completed college, their household incomes are almost entirely from off-farm sources and exceed consumption expenditures by a wide margin. Farm households in the *lower income-higher wealth* group are forecasted to comprise 44 percent of the total. The annual household incomes of these households are generally below their expenditures. This group contains a disproportionate share of mid-size farms and of farmers who are retired. For many of these, farm-derived income is often negative.

The *lower income-higher wealth* farms hold a vast majority of their net worth in business assets (such as land, machinery, and crop and livestock inventories). The retired or more elderly farmers in the group who do not have sufficient current earnings from farming can access their accumulated assets or begin to consume capital assets (e.g., choose not to replace machinery or equipment as it wears out). Generating a sustained flow of income from the household's asset base to support household consumption requires either disposing of the farm or renting/leasing to other farmers or to the government through land retirement programs (such as the Conservation Reserve Program).

Finally, about 5 percent of farm households are projected to be in the *lower incomes and lower wealth* group. For this group, principally small and limited-resource farms, there are thin margins between household incomes and consumption expenditures. A small percentage are farmers by occupation and nearly 41 percent are limited-resource households. Moreover, the small asset base of these households may be insufficient to meet any unexpected shortfall in household earnings. Nearly 45 percent of these households have income less than consumption expenditures. For limited-resource households, there is insufficient income to support even relatively low levels of current consumption and few assets to meet or enhance consumption.

Our observation is that because incomes are similar for farm and non-farm households, these forecasts are driven by the large differences in wealth between farm and non-farm households. Finally, the distribution of farm households in each group is consistent over time and is not expected to change in the coming year (figure 13).

Summary and Conclusions

Improvement in market conditions for most agricultural commodities that began in 2001 is likely to resume in 2003. Both crop and livestock receipts should exhibit a steady growth pattern in the upcoming 3 to 5 years. Income and wealth are important indicators of the financial health at the sector level, but they do not reflect financial well-being at the household level. Farm households differ in the way they operate the farm, operator's primary occupation, commodity specialization, and government payments. For example, if farm households were totally reliant on farming for their income, there would be difficulties with their income levels. This is not the case, very often because of choice of career focus. Farm households have varied sources of income and multiple sources of savings and investment. Many of rural residence farms report a loss from farming, but derive almost all of their income from off-farm sources or retirement income. Commercial farms, that produce the majority of the farm output, derive a large proportion of their income (80 percent or more) from farming. However, these farms also have off-farm income. Taking into account both changes in household earnings and changes in asset values, particularly business assets owned by farm families, USDA expects farm households to be in an improved economic position in 2003. Farm households are no different than other households in dual-career choice and earnings. Therefore, the well-being of farm households should be compared to all other households. Four distinct groups, based on income and wealth, emerge from this comparison. Results reveal that in 2003 only 5 percent of farm households are expected to in a disadvantaged (lower income-lower wealth group) position relative to all U.S. households.