

## PolicyPennings by Daryll E. Ray & Harwood D. Schaffer

# Worst drought in decades and U.S. net farm income is projected to increase—how can that be?

Given the widespread drought in the US Midwest, USDA's late August release of the 2012 Net Farm Income Forecast contained a big surprise. According to the United States Department of Agriculture (USDA), "U.S. net farm income is forecast to exceed \$122 billion in 2012 and net cash income is expected to exceed \$139 billion, both record nominal values. The expected increase in income reflects large price-led gains in corn and soybean receipts as well as large increases in crop insurance indemnities...."

"Extreme hot and dry conditions in the Plains and Corn Belt are drastically cutting projected corn and soybean yields. With corn and soybean supplies for the 2012 marketing year expected to be the lowest in 9 years, prices are increasing dramatically, resulting in higher expected 2012 calendar-year receipts for many crops" (<http://ers.usda.gov/topics/farm-economy/farm-sector-income-finances/highlights-from-the-2012-farm-income-forecast.aspx>).

If that income were spread evenly over all farming operations, one could sit back and heave a sigh of relief, after two months of worrying about the impact of the drought on farmers. But as a look at the numbers show, the income is not evenly spread across all farms.

As a sector, the value of livestock production decreased \$0.2 billion from a year earlier. The big loss in value of production came in the dairy sector, which is forecast to see a decline of \$4.3 billion (10.9 percent) while both meat and eggs are slated to see increases. Over and above changes in the value of production in the livestock sector, the USDA forecasts that the price of feed will increase by \$7.2 billion (13.2 percent). That means that after taking feed costs into account, the livestock sector is forecast to see numbers that will be well below last year.

And those numbers are for the sector as a whole. The experience of individual livestock producers is likely to vary widely. For dairy farmers in drought areas who depend upon on-farm feed production, the picture is likely to look a lot worse with income on their farm heading toward deep red. Farmers who have both crop and livestock income may see a wash. Even cow-calf operators in areas with adequate pasture are likely to see some loss in income as the market for their calves takes a downturn due to lower profit expectations by feedlot operators.

The surprise is that the crop sector is projected to "weather" the drought much better than one would naturally expect. Corn yields and production are arguably hit the hardest by the drought

so let's focus on corn.

Since corn planting this spring, the USDA has dropped its corn production projection from 14.8 billion bushels to 10.8 billion bushels, a decline of 27 percent. During this same time, the price of corn has increased by about a 40 percent.

This is a rough illustration of what economists would expect. Why? Because it is well known that the corn market is price inelastic. (Stay with us here, it's easier to see this than you might think.) The -27 and 40 percent numbers are consistent with a demand elasticity of -0.675 or a price flexibility of -1.48. What this means in plain English is that for each one percent drop in output, the price increases by 1.48 percent. So, in this illustration for the 27 percent drop in output, the price increases by -1.48 times -27, or 40 percent.

How this affects individual farmers' bottom lines, of course, depends on how much yield reduction they experience on their farms. Those farmers whose yields decline by, say, 25 percent or less will see higher revenues than they expected at planting time. Farmers lucky enough to have trend or even higher yields could have their best revenue and net income years ever.

The profit or loss of farmers whose yields drop by more than the percentage decline at national level will depend upon whether or not they bought crop insurance and what options they chose.

At one end of the spectrum, farmers with substantially reduced yields but who purchased a high level of coverage with the harvest-price adjustment could see per acre corn revenue greater than what they expected at planting time (<http://www.farmdocdaily.illinois.edu/004602print.html>). For those who bought low levels of coverage and did not purchase the harvest-price adjustment, this year could well be a financial disaster.

It would appear that while crop insurance provides a safety net for farmers, the net is somewhat leaky, guaranteeing pure profit for some while leaving others with significant losses.

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