

## Will We Farm Every Acre in 2016?

It is no secret that commodity prices are at levels that could easily be below the cost of production for some producers. In fact, the price of corn, soybeans, and wheat have all declined for the past three years. The latest USDA World Agriculture Supply and Demand Estimate projected the average farm price per bushel for the 2015/2016 crop year to be between \$4.90-\$5.10 for wheat, \$3.35-\$3.85 for corn, and \$8.05-\$9.05 for soybeans. Only two years ago, the USDA reported that the average farm price per bushel was \$6.87 for wheat, \$4.46 for corn, and \$13.00 for soybeans.

According to the USDA Farm Service Agency, the amount of acres enrolled in the Conservation Reserve Program (CRP) has declined since 2005. According to the 2005 CRP annual summary, there were 34.90 million acres in the program. In 2005, we had yet to hit the record high in grain prices. The 2012 CRP annual summary showed that total acres in the program were 29.53 million acres. If we fast forward to the end of 2015, then we will discover that the December 2015 CRP report showed that 23.55 million acres were enrolled in the program. Of course, it cannot be said that every acre that was removed from CRP went into row crop production. In fact, by reviewing the nation's total harvested acres for principal crops as reported by the National Agricultural Statistics Service (NASS), we will see that total harvested acres in 2005 equaled 303.57 million acres and equaled 304.53 million acres in 2015. The average between 2005 and 2015 actually equaled 302.95 million acres.

Although not all ground removed from CRP went into row crop production, we do know of instances where this has indeed occurred. It is no secret that some acreage that was in CRP, or possibly pasture, was tilled up and planted into row crops. This was done due to the high commodity prices that we experienced between 2010 and 2012. Landowners and farmers were hard pressed to keep ground in CRP or pasture due to the returns they could receive from row crops. Even if the ground was marginal land, the higher prices of grains incentivized landowners to plant the acres in row crops. However, in a year like 2016 when margins are so tight, can we afford to plant a crop on acres that could result in subpar yields?

For example, if a producer is looking at a particular farm that has a lower yield potential, that producer will likely be very conscientious about the inputs that is applied to that farm. If we use a scenario of a field that has a yield potential of 110 bushels per acre for corn, what would the net return for that field look like at today's price levels? By using the UT Extension crop budgets, the net return per acre would be a loss of -\$115.92. The price used in the example is \$3.60 per bushel, which was the TN state average forward contracted price as of 4/1/2016. This example is assuming that the ground is classified as being marginal, which often refers to ground that has a yield potential that is below the county average yield. As in this example, the yield of 110 bushels per acres is below the average yield for most West Tennessee farm land. The following table illustrates the figures that was used in the corn example:

(Table is located on next page.)

2016 Corn, No-Till, Non-Irrigated Budget					
		Unit	Quantity	Price	Total
Revenue		Gross Revenue (\$/Acre)			
	Corn	Bu	110	\$ 3.60	\$ 396.00
Total Revenue					\$ 396.00
Variable Expenses					
	Seed	Thous.	32	\$ 3.13	\$ 100.00
	Fertilizer & Lime	Acre	1	\$ 140.98	\$ 140.98
	Chemical	Acre	1	\$ 48.60	\$ 48.60
	Crop Scout or Consultant	Acre	1	\$ 6.00	\$ 6.00
	Repair & Maintenance	Acre	1	\$ 21.18	\$ 21.18
	Fuel, Oil & Filter	Acre	1	\$ 8.72	\$ 8.72
	Operator Labor	Acre	1	\$ 5.20	\$ 5.20
	Cash Rent	Acre	1	\$ 98.00	\$ 98.00
	Crop Insurance	Acre	1	\$ 13.84	\$ 13.84
	Operating Interest	%	6.00		\$ 13.28
Total Variable Expenses					\$ 455.79
Return above Variable Expenses					(\$59.79)
Fixed Expenses					
	Machinery				
	Capital Recovery	Acre	1	\$ 41.13	\$ 41.13
	Management Labor	Acre	1	\$ 15.00	\$ 15.00
Total Fixed Expenses					\$ 56.13
Return Above All Specified Expenses					(\$115.92)

Now, let's look at an example of a wheat crop followed by double crop soybeans. The below example is based off of UT Extension crop budgets as well. The yields used are shown as being below normal production levels. The UT crop budgets normally use a 60 bushel yield average for wheat and a 35 bushel average for double cropped soybeans. However, in this example, we are assuming that the land is marginal ground. Therefore, yields have been lowered to 50 bushels per acre for the wheat crop and 25 bushels per acre for the soybean crop:

(Table is located on next page.)

2016 Wheat/Soybean Double Cropped, Non-Irrigated Budget					
		Unit	Quantity	Price	Total
Revenue		Gross Revenue (\$/Acre)			
	Soybeans	Bu	25	\$ 8.99	\$ 224.75
	Wheat	Bu	50	\$ 4.70	\$ 235.00
Total Revenue					\$ 459.75
Variable Expenses					
	Seed, Soybeans	Thous.	140	\$ 0.36	\$ 50.00
	Seed, Wheat	Bu	2	\$ 18.50	\$ 37.00
	Fertilizer & Lime	Acre	1	\$ 115.30	\$ 115.30
	Chemical	Acre	1	\$ 112.74	\$ 112.74
	Crop Scout	Acre	1	\$ 6.00	\$ 6.00
	Repair & Maintenance	Acre	1	\$ 45.18	\$ 45.18
	Fuel, Oil & Filter	Acre	1	\$ 19.33	\$ 19.33
	Operator Labor	Acre	1	\$ 12.78	\$ 12.78
	Cash Rent	Acre	1	\$ 98.00	\$ 98.00
	Crop Insurance	Acre	1	\$ 16.32	\$ 16.32
	Operating Interest	%	6.00	\$ 0.06	\$ 15.38
	Other Variable Costs	Acre	1	\$ -	\$ -
Total Variable Expenses					\$ 528.03
Return Above Variable Expenses					(\$68.28)
Fixed Expenses					
	Machinery				
	Capital Recovery	Acre	1	\$ 83.58	\$ 83.58
	Management Labor	Acre	1	\$ 15.00	\$ 15.00
Total Fixed Expenses					\$ 98.58
Return Above All Specified Expenses					(\$166.86)

In regard to land that would qualify for CRP, one has to consider the payment rate if that land was enrolled into CRP. The payment rate for CRP does vary greatly between counties and even between farms. It is all dependent upon the erodibility of the soil on that particular farm. For example, in West Tennessee the payments can range from approximately \$60 per acre on less erodible land in certain counties to upwards of \$140 per acre on more erodible farms in other counties. However, for the purpose of this article, let's assume a CRP payment of \$120 per acre. A farmer that owns land that could be placed into CRP would be faced with the decision of either enrolling those acres in the government program or working the ground. If we use the same example above with the farm that was planted in corn, we can estimate what the potential return to the landowner would be for both scenarios. By removing the land expense (i.e. rent), we can see that the return after variable expenses would equate to \$41.15 per acre. This does not include fixed expenses. In reality, fixed expenses would still be incurred whether the land is farmed or placed in CRP as the assets will likely be retained either way. We do need to at least acknowledge that the planted acres will have a higher management and equipment cost. If we are looking at the farm on a per acre basis, the farmer that owns this land would have to earn a return that exceeds the assumed CRP payment of \$120 per acre. As you can see in this example, the return after variable expenses of \$41.15 per acre is well below the estimated CRP payment. Thus, incentivizing the farmer to not plant the land that could be enrolled in CRP.

In a year like 2016, farmers will have to look at every aspect of their operation as they finalize their plan for the 2016 crop year. Farmers will be looking for ways to improve their net farm income by

either increasing revenues or by lowering expenses. Unfortunately, farmers are price takers and not price makers, which means increasing revenues can be a challenge. Therefore, producers will be tasked with proactively marketing their grain in an attempt to sell at profitable levels, or as close to break-even as possible, while also managing expenses. Producers have more control over production costs than market prices. That being the case, farmers will spend quite a bit of time on reviewing their cost structure. In 2016, farmers will be scrutinizing every expense and input cost in order to try and improve their bottom line. We may not yet be at the point that producers will let farms go due to perceived losses by working marginal ground, but farmers will at least be looking at their cost structure to see if there are ways to try and improve their earnings on every acre. However, if we do not see commodity prices increase for a prolonged period of time, we may see producers not renew leases on acres with lower yield potential. For some, this could be the case in 2016.

Authored by Danny Morris – Area Farm Management Specialist