

Grain sorghum has lost money in 9 of last 10 years

The last crop costs and returns numbers (<https://tinyurl.com/y83dgl6k>) that we are going to examine is grain sorghum—also called milo in some regions. Grain sorghum is grown on 5.4 to nearly 8.5 million acres in any given year over the last decade. Most of the sorghum was harvested for grain, but a portion (3.6 percent to 5.6 percent) of it is harvested as silage that is fed to cattle. In 2016, grain sorghum was planted on 6.7 million acres, 1.8 million acres fewer acres than were planted a year earlier.

Because sorghum is generally grown in arid areas of the US, the portion of abandoned acres is higher than for other crops. Over the last decade (2007 to 2016 crop years), the percentage of abandoned acres has varied widely from 3.4 percent in 2016 to 23.5 percent in 2011. The number of abandoned acres has ranged from a high of 1.3 million acres to a low of 229 thousand acres.

The yield increased by 2.4 bushels per acre—4.0 percent—between 2015 and 2016 while the season average price received by farmers declined by \$0.52 (15.7 percent) per bushel. The value of silage and grazing amounted to \$4.33 per planted acre, a \$0.03 per acre increase. As a result of the higher yield and the lower price, the value of production fell by \$24.76 per planted acre (12.1 percent) between the two years.

Sorghum farmers were able to reduce their operating costs by \$8.88 per planted acre (6.7 percent). The greatest cost reduction was for fertilizer, \$7.07 per planted acre (16.1 percent), followed by fuel, lube, and electricity at \$2.53 per planted acre (16.4 percent). Reductions in costs were also achieved for seed (\$0.53 per planted acre), repairs (\$0.06), other variable expenses (\$0.02), and custom operations (\$0.01).

The largest increase in operating expenses was for chemicals (\$1.17 per planted acre). Interest on operating expenses increased by \$0.17 per planted acre or 154.5 percent.

Producers were able to reduce their allocated overhead for sorghum by \$2.46 per planted acre (1.4 percent). The greatest decrease was in the opportunity cost of land per planted acre (\$3.18), followed by hired labor (\$0.20), and taxes and insurance (\$0.01). Increases were seen in the opportunity cost of unpaid labor (farmer) (\$0.72 per planted acre), general farm overhead (\$0.12), and capital recovery of machinery and equipment (\$0.09).

As a result of these changes, sorghum farmers were able to reduce their total listed costs by \$11.34 per planted acre, not enough to compensate for the decline in the value production of \$24.73 per planted acre. The result was that sorghum farmers lost \$13.39 per planted acre. The change in the value of production per planted acre fell to a loss of \$123.79 in 2016 from a loss of \$110.40 a year earlier. Based on the season average price paid to farmers, they lost money on sorghum production in 9 of the last 10 years.

The current 2017 projection for grain sorghum is a yield of 64.4 bushels per planted acre. With a mid-point season average price projection of \$3.15 per bushel, farmers will receive \$202.86 per planted acre from their grain. If they receive \$4.33 for their silage and grazing they will have a total income of \$207.19 per planted acre. If they were able to maintain their 2016 costs into the 2017 crop year they will still end up with a loss of \$96.07 per acre.

Of the six crops we have studied in this series that looks at the costs and returns for these crops (corn, soybeans, wheat, cotton, rice, and sorghum) most have experienced losses over the

last four years. And all but soybeans are showing a projected loss for the 2017 crop year, much of which will be sold in 2018.

Thus, it comes as no surprise to us that the recent USDA forecast of 2018 calendar year net farm income falls by \$4.3 billion to \$59.5 billion from \$63.8 billion in 2017 (<https://tinyurl.com/y875xxdm>). Revenue from crops, animals and products, and Federal Government direct farm program payments all show a year over year decline. Net farm income projection for 2018 is \$64.3 billion below the level seen in 2013 (\$123.8 billion), a decline of 52 percent.

Next week we will examine the consequence of this precipitous decline in net farm income for farmers and their farm operations.

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