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Weekly Farm Economics: 2022 Break-Even Prices for Corn and Soybeans

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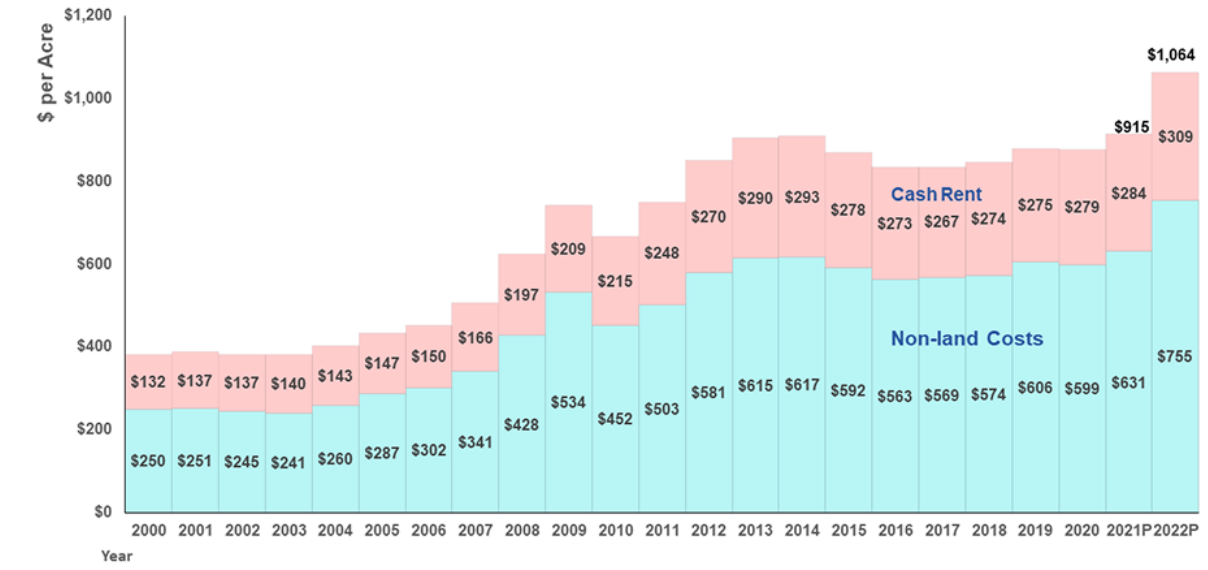
Break-even prices to cover total costs for 2022 are projected at $4.73 per bushel for corn and $11.06 per bushel for soybeans. Compared to historical levels, these break-even prices are very high. While current fall bids are above break-even levels, the high break-even levels present risks in 2022.

Background

As discussed frequently, corn and soybean production costs will increase to record levels in 2022 (see *farmdoc daily*, July 27, 2021, August 24, 2021, November 23, 2021, December 7, 2021). Rising costs are caused by high commodity prices, inflationary pressures, and supply disruptions. By far, the cost with the most significant increase will be fertilizer, with the level of fertilizer prices for spring unknown at this point (see *farmdoc Daily*, November 3, 2021, November 30, 2021, December 14, 2021).

Figure 1 shows total costs for corn produced on high-productivity farmland in Central Illinois. Historical data comes from Illinois Farm Business Farm Management (FBFM). Bars for each year show non-land costs plus average cash rent. Data for Figure 1 are given in the *Revenue and Costs for Illinois Crops*, available in the management section of *farmdoc*.

Figure 1. Total Costs of Producing Corn on High-Productivity Farmland in Central Illinois



For 2022, total costs for corn are projected at $1,064 per acre, with $755 in non-land costs and $309 in cash rent. Total costs are projected at record levels, exceeding 2021 costs of $915 by $149 per acre and rising above $1,000 per acre for the first time.

Record levels of costs then will lead to much higher break-even prices. Break-even prices are calculated for two measures:

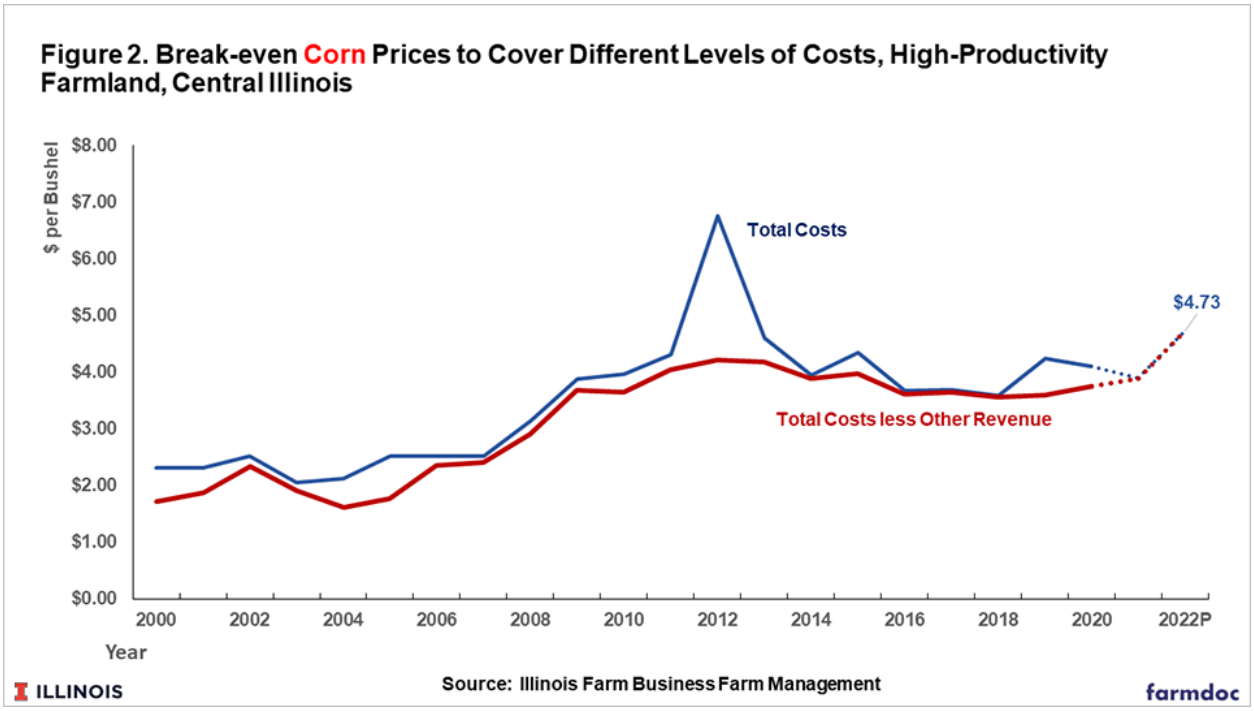
1. Break-even price to cover total costs equals total costs divided by yield. Total costs for corn are shown in Figure 1. Historical yields from 2000 to 2021 are used to calculate a projected yield for 2022. The projected trend yield for 2022 (225 bushels per acre for corn and 71 bushels per acre for soybeans) is used to calculate break-even price. For 2022, the projected break-even price to cover total costs is $4.73 per bushel ($1,064 total cost / 225 expected yield).

2. Break-even price to cover total costs less other revenue. In many years, farmers have had significant revenue from commodity title payments (e.g., Agriculture Risk Coverage and Price Loss Coverage), crop insurance, and ad hoc Federal payments. These payments reduce the level of revenue needed to break even. For 2022, other revenue is not budgeted, as prices are well above levels that would trigger commodity title payments and yields at trend will not trigger crop insurance indemnity payments. As a result, both break-even price definitions will have the same value for corn in 2022 of $4.73 per bushel.

Having prices at break-even levels will not result in financial stability. Net income will equal zero. Positive incomes are needed to cover necessary family living expenses and provide funds for debt repayments and capital replacement.

2022 Break-even Corn Prices

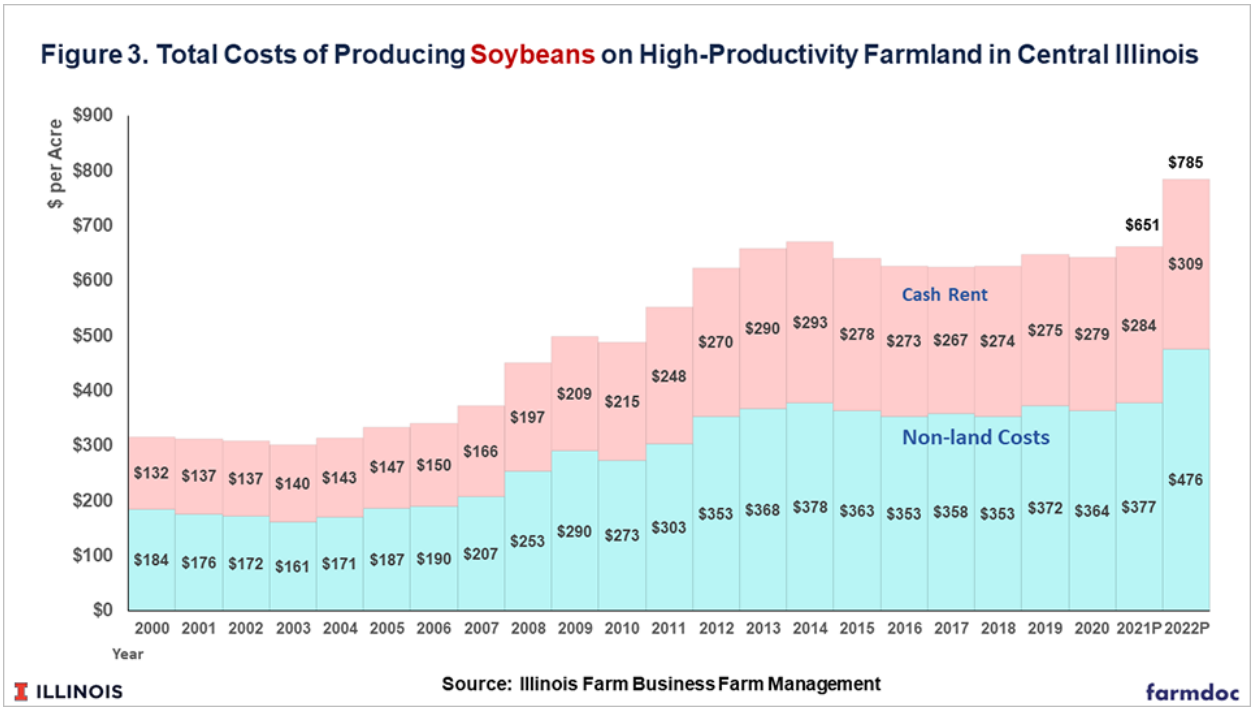
For high-productivity farmland in central Illinois, the break-even price to cover total costs is estimated at $4.73 per bushel (see Figure 2). From 2013 to 2021, actual break-even prices to cover total costs averaged $4.00, $.73 well below the $4.73 level projected for 2022. The break-even price to cover total cost was the highest in 2012 at $6.75 per bushel. This high level resulted because of low yields caused by the 2012 drought.



When other revenue is considered, break-even prices have not exceeded $4.73 per bushel. From 2012 to 2021, break-even corn prices to cover total costs less other revenue averaged $3.78, $.95 lower than the 2022 projected level. Before 2022, the highest break-even considering other revenue was $4.22 in the 2012 drought year.

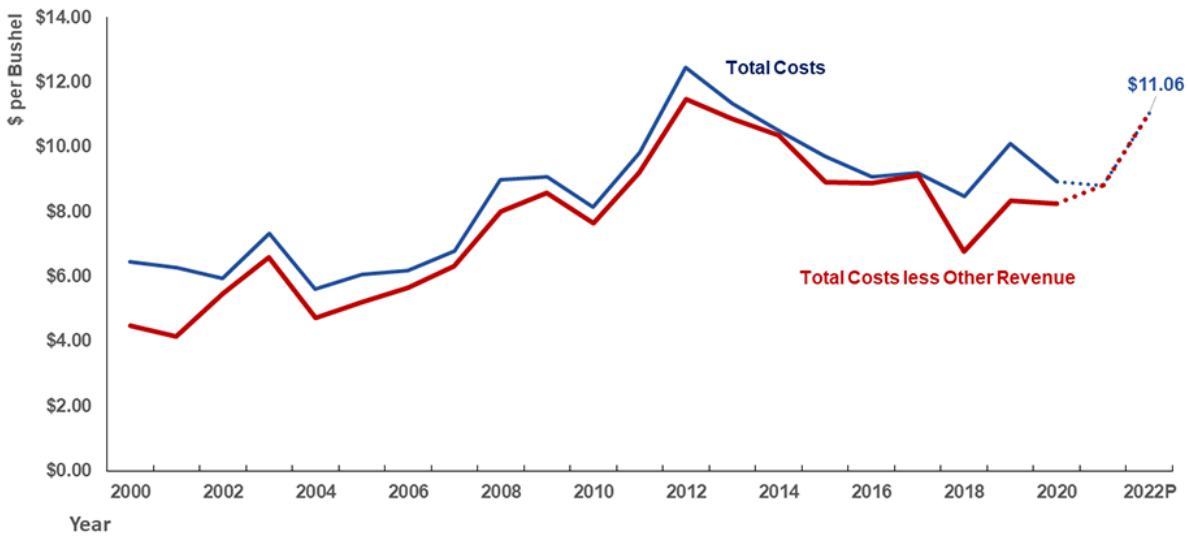
2022 Break-even Soybean Prices

Like corn, soybean costs are projected at record highs in 2022 (see Figure 3). Total costs are projected at $785 per acre, with $476 per acre in non-land costs and $309 per acre in cash rent. The 2022 projected costs exceed 2021 cost of $652 per acre by $124 per acre.



The break-even price to cover total costs less other revenue for soybean in 2022 is projected at $11.06 per bushel (see Figure 4). The average break-even from 2012 to 2021 was $8.92 per bushels, $2.13 per bushel below the projected 2021 level. The $11.06 level for projected for 2022 is only exceeded in the 2012 drought year when the break-even level was $11.46.

Figure 4. Break-even Soybeans Prices to Cover Different Levels of Costs, High-Productivity Farmland, Central Illinois



Commentary

High break-even price levels highlight the risk associated with crop production in 2022. Current fall bids — $5.00 per bushel for corn and $12.00 for soybeans — are above break-even levels. However, commodity prices will need to remain at historically high levels for profitable crop production to occur. Pricing some grain at current levels would be prudent.

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