



Cornhusker Economics

Could the EPA Cause the Next Farm Financial Crisis?

The inflation that crept into the economy in 2022 surprised many since it had not been seen for about 40 years. What has also not been seen for about 40 years is the type of farm-level financial stress causing some quarter of a million farms lost, the devastation of whole rural communities, and a compromised community banking sector and Farm Credit System (FCS). In 1981, as the Federal Reserve's tighter monetary policy began to take effect, U.S. farmland value nominally peaked at about \$785b. By 1985, it had fallen by about 31% from the peak resulting in a sector debt-to-asset ratio of just over 22%.

Mainly due to the experience of the 1980s, current concerns over tighter monetary policy as it relates to farmland are not without merit. Even so, the U.S. Farm Sector is in a much better financial position than in the 1980s. While farmland values have increased rapidly in each of the last two years, financing does not appear to have involved the copious use of debt as in the late 1970s and early 1980s. Indeed, the sector debt-to-asset ratio has been stable for the last several years at about 13%. In addition, the sector's Net Farm Income broke records in 2021 and 2022. Everything from seed and machinery technology to farm policy emphasizing yield and revenue insurance suggests that the sector can weather a storm better than in the 1980s.

Yet there are still reasons for concern. One such concern for Midwestern crop farms is the reliance on corn grown for ethanol and the nation's energy policy. Past debates related to ethanol have tended to concentrate on the amount of ethanol and other biofuels that must be blended into the U.S. fuel supply, known as the mandate. However, on April 12, 2023, the Environmental Protection Agency (EPA) released an emissions

proposal for cars, sport-utility vehicles, and pickups manufactured from 2027 to 2032. The goal of the proposal is to encourage more EV production and sales with the ultimate intended consequence of ending the era of the internal combustion engine (Thomas and Felton). Since EVs do not require gasoline, they would not require ethanol either and the mandate would simply become irrelevant under the EPA's proposal. While the intended consequence of the proposal is clear, some unintended consequences are worth mentioning.

Iowa produced more gallons of ethanol in 2022 than any other state, with Nebraska second, followed by Illinois, South Dakota, and Indiana. In 2022, about 57% of Iowa's corn and 32% of Nebraska's corn crops were processed at ethanol plants. Similar statistics show the strength of the relationship between the nation's energy policy regarding ethanol and significant corn-producing states primarily concentrated in the Midwest. For example, in states like Iowa and Nebraska, the average annual per bushel price of corn has roughly doubled since the ethanol mandates were implemented in 2005 via the Renewable Fuel Standard. While it is unlikely that all of this increase can be attributed to ethanol, there is little doubt that it has had a significant positive effect on the price of corn. Given current production technology and cash rental rates in Iowa and Nebraska, a quick analysis suggests that as much as 32% of farmland value could be lost if the price of corn fell to half what it averaged in 2022. This number should look familiar as it is approximate to the decline in farmland value experienced during the farm financial crisis in the 1980s. This is not to suggest that a one-off steep price decline would cause such a loss of value. Rather, a structural change such as the EPA's proposal that resulted in a permanent reduction in the demand for corn and hence its price.

To provide additional context, Iowa allocated over 12M acres to corn (for grain) production and over 10M acres to soybean production in 2022, and the state average farmland value per acre was \$9,350. Losing nearly one-third of the average value for just the corn acreage translates to approximately \$38B in lost value. Concentrating on just the corn acreage results in a conservative estimate that necessarily understates the loss since corn and soybeans are often grown in rotation. For Nebraska corn acres, the loss could be more than \$17B. Collectively, the top five corn-producing states (Iowa, Illinois, Nebraska, Minnesota, and Indiana) could stand to lose well over \$100B in farmland value from corn acreage alone from a permanent 50% decrease in the price of corn.

While the primary unintended consequence of more EV production and sales may be a dramatic decline in the value of farmland in the Midwest, such a decline in the price of corn would have profound implications for the financial viability of Midwestern farming operations and the nation's food supply. In addition, rural businesses that rely on a viable agricultural sector would be negatively impacted, as would rural schools, because property taxes are the primary source of school funding. Community lenders and the FCS banks currently underwrite over 80% of all farmland debt. In states like Iowa and Nebraska, it is not uncommon to find rural community banks with a ratio of farm loans to total loans over 25%. The average percentage of farmland loans to total loans among all banks in Iowa and Nebraska was about 21% as of 2022.Q4. Rural lenders also operate with a small geographic footprint suggesting that most if not all of their loan portfolios, in one way or another, are tied to the fortunes of their local agricultural economies. Similarly, Farm Credit Services of America is the largest Agricultural Credit Association in the FCS, with total assets of over \$40B as of 2022.Q4. A more or less monoline lender with a territory that includes Iowa and Nebraska, FCS of America has a ratio of farmland to total loans of nearly 60%, with much of the remaining proportion devoted to farm operating loans and loans for machinery, equipment, and breeding livestock.

From a lending perspective, a precipitous drop in commodity prices for any reason is cause for concern since lenders rely on borrowers' Net Operating Income (NOI) to service farm real estate debt. Any decline in the price of corn can easily lead to a decrease in NOI, making it more challenging to make that next loan payment. As noted above, a significant and permanent drop in the price of corn would likely also be met with a precipitous drop in the value of the collateral pledged for the loan, namely, the farmland itself. A corn producer in Iowa who paid the state average price per acre of \$7,170 in 2020 and

financed 75% of the purchase with a 20-year note at 6% interest with annual payments would still owe about \$5,076/acre in 2022. The loan-to-value (LTV) ratio would have fallen from 75% to about 54% through modest principal repayment and two solid years of farm real estate appreciation. Assuming an approximate one-third loss of value implies that the LTV ratio would jump to 81% even with principal repayment. It is doubtful that lenders would feel comfortable with that level of LTV ratio, mainly when a low corn price implies servicing that level of debt would be difficult, if not impossible. Further, the stress to the financial institutions with existing farm real estate loans would be historic.

There may be many compelling economic and environmental reasons to scale back, phase out, or even eliminate the ethanol mandate as a component of the nation's energy policy. Some of these concerns relate to placing limits on federal subsidies for ethanol and biofuels in an attempt to address the national deficit (Groves). However, perhaps before attempting an end-run around current energy policy in the name of the lofty goal of saving the planet, the EPA should slow down and carefully consider all of the potential consequences of its proposal. Any serious analysis that results in a recommendation to remove ethanol from the nation's energy strategy, either directly or indirectly, must include a full accounting of not just the intended consequences but the unintended ones as well. The potential negative impacts of the EPA's proposal on the financial viability of a significant portion of the agricultural sector, community banks, the Farm Credit System, and the businesses, schools, and ultimately people making up rural communities are too substantial and important to ignore.

References

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