



## Weekly Farm Economics: Illinois Grain Farm Incomes in 2020

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We project net incomes for a typical Illinois grain farm in 2020. Before the onset of COVID-19, 2020 net incomes were expected to be low without a turnaround in exports, likely resulting in pressures to continue Market Facilitation Program (MFP) payments. With COVID-19 at the forefront in 2020, the Coronavirus Food Assistance Program (CFAP) was implemented to provide relief to offset losses due to the virus and COVID-19 control measures. Even with CFAP payments and larger payments from commodity title programs, incomes are projected to be negative in 2020. More Federal aid could result in 2020 incomes being close to 2019 incomes. Looking ahead, the recent increases in Coronavirus outbreaks suggest this environment may not improve soon and could result in very low incomes in 2021.

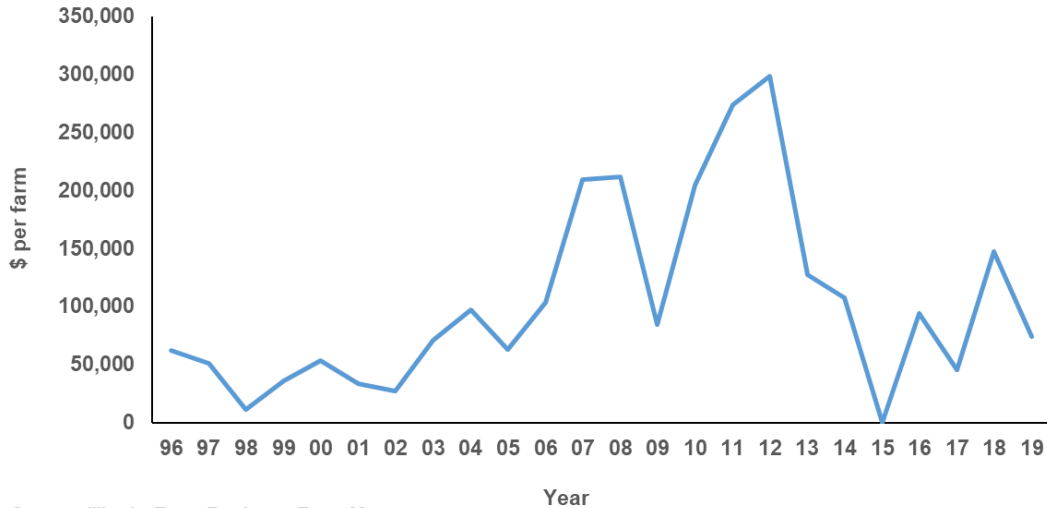
### Incomes in Historical Perspective

Figure 1 shows the average yearly net incomes on grain farms enrolled in Illinois Farm Business Farm Management (FBFM). Overall, incomes have been much lower since 2013 as compared to the period from 2006 to 2013. Incomes averaged \$189,000 per farm for the years from 2006 to 2013. From 2014 to 2019, incomes have been over \$100,000 less per farm, with a \$78,000 yearly average. From 2006 to 2013, corn use in producing ethanol was growing, leading to higher corn prices. Soybean prices also were high, as the market signaled the need for soybean acres as soybean exports from the U.S. to China were increasing. Since 2013, corn use in ethanol has stabilized, leading to lower commodity prices. In 2018, exports of soybeans declined, further lowering commodity prices.

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Figure 1. Average Net Income on Illinois Grain Farms Enrolled in FBFM



Source: Illinois Farm Business Farm Management

Average incomes were \$147,000 in 2018 and \$74,000 in 2019. Compared to other years since 2013, the years 2018 and 2019 were not particularly poor income years. However, much of the income in 2018 and 2019 resulted from the Market Facilitation Program (MFP), which was put in place to counter lower prices caused by trade disputes. MFP accounted for 13% of revenue in 2018 and 10% of 2019 revenue (see *farmdoc daily*, [June 10, 2020](#)). Without these payments, incomes would have been very low in both 2018 and 2019.

### Approach Used to Estimated Historic Incomes

The incomes in Figure 1 are calculated by FBFM using a modified cost approach for a calendar year. Each year's income statement attempts to match production with sales. In 2019, costs of 2019 grain production are given along with "revenue" from 2019 production. To match revenue with production, values are placed on a number of items for which the revenue has not been received. These items include:

- Grain inventory. Much of the grain produced in 2019 has not been sold as of the end of the year. The unpriced inventory is placed on the end-of-year balance sheet for 2019 at an estimated value.
- Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) payments for 2019. The ARC/PLC payment for 2019 is based on 2019 production but will be received in October 2020. These payments are not known on December 31, 2019 because the payments are based on a Market Year Average (MYA) prices, which run from September 2019 to August 2020 for corn and soybeans.

These two values will take on a large importance in 2020 cash income. Inventory prices used to place grain in inventory on December 31, 2019 were much higher than actual sales on many farms. FBFM used inventory prices of \$3.75 for corn and \$9.30 for soybeans. In May, cash prices were near \$3.00 for corn and \$8.30 for soybeans. The difference will result in an unrealized loss on grain held in December 31, 2019 inventory on many farms.

ARC/PLC payments likely will be higher than the December 31, 2019 receivable. Lower MYA prices will result in higher ARC/PLC payments than estimated on December 31, 2019.

To summarize, three items will take a larger role in 2020 income projections than usual:

1. Unrealized loss on 2019 crop. Farmers who held 2019 grain inventory likely will have large losses on holding that crop into 2020. Marketing weights suggest that 60% of the corn crop and 46% of the soybean crop is held into the next year.
2. Changes in 2019 ARC/PLC payments. Expectations of the size of these payments increased because of lower prices.
3. Coronavirus Food Assistance Program (CFAP) payments (see *farmdoc daily*, [May 22, 2020](#)). CFAP provides partial compensation for losses on grains held unpriced on January 15, 2020.

### Income Projections for 2020

Income projections for 2020 are made using output from the *Farm Projections Tool*, a Microsoft Excel spreadsheet that can be downloaded from the FAST section of *farmdoc*. Farmers can use this spreadsheet to make projections for their individual farms. Special adjustments are made to the output to account for the above three items, which are not accounted for by the program automatically.

In this article, the farm for which 2020 projections are made represents a typical farm in central Illinois:

- A 1,600 acre grain farm with 200 acres owned, 400 acres share-rented with a 50-50 share lease, and 1,000 acres are cash rented at \$260 per acre.
- The farm is located in central Illinois and has non-land costs equal to those contained in central Illinois budgets for high-productivity farmland: \$561 per acre for corn and \$359 per acre for soybeans.
- Yields for 2020 are projected at trend-levels of 216 bushel per acre for corn and 68 bushels per acre for soybeans.
- The farm has \$1,200,000 of debt.

### Pre and Post-COVID Net Incomes

Incomes are estimated for a pre-COVID scenario and a post-COVID scenario (see *farmdoc daily*, [April 28, 2020](#) for a discussion of price scenarios). Prices used for the pre-COVID scenario are \$3.90 per bushel for corn and \$8.75 per bushel for soybeans. Under this scenario, net income is projected at \$44,330, which is down from 2018 and 2019 levels. A \$44,330 income would be at an insufficient level to maintain the financial position of most farms. Most farms would use working capital to provide for cash needs, resulting in reductions of working capital. Many farms would see net worth declines. This pre-COVID income estimate does not include any MFP payments. Due to low incomes, pressures likely would have built for a continuation of the MFP program into 2020, particularly without improvement in trade relations and growth in exports. Whether or not MFPs would have occurred in 2020 given the pre-COVID scenario is an open question.

Under the pre-COVID prices (\$3.90 for corn, \$8.75 for soybeans), ARC/PLC payments would not result for 2020 (payable in 2021), and the pre-COVID income statement in Table 1 does not include any ARC/PLC payments. Note that many Illinois farms would have received 2019 commodity title programs. These payments will be received in 2020 but should have appeared on the 2019 income statement, and been a receivable on the year-end 2019 balance sheet.

**Table 1. 2020 Income Projections for a 1,600 Acre Illinois Grain Farm for Pre-COVID and Post-COVID Scenarios**

|                                   | Pre-COVID        |                            | Post-COVID     |                            |
|-----------------------------------|------------------|----------------------------|----------------|----------------------------|
|                                   | Total Farm       | Tillable Acre <sup>1</sup> | Total Farm     | Tillable Acre <sup>1</sup> |
|                                   | per farm         | per acre                   | per farm       | per acre                   |
| Crop revenue                      | 1,005,830        | 629                        | 890,960        | 551                        |
| CFAP                              | 0                | 0                          | 29,187         | 18                         |
| Market loss on 2019 crop          | 0                | 0                          | -43,680        | -27                        |
| Increase in 2019 ARC/PLC payments |                  |                            | 18,000         | 13                         |
| 2020 ARC/PLC payment              | 0                | 0                          | 42,000         | 26                         |
| Other farm revenue                | <u>10,000</u>    | <u>6</u>                   | <u>10,000</u>  | <u>6</u>                   |
| <b>Total revenue</b>              | <b>1,015,830</b> | <b>635</b>                 | <b>946,467</b> | <b>587</b>                 |
| Variable costs                    | 462,500          | 289                        | 462,500        | 289                        |
| Other costs                       | <u>347,200</u>   | <u>217</u>                 | <u>347,200</u> | <u>217</u>                 |
| <b>Total operating costs</b>      | <b>809,700</b>   | <b>506</b>                 | <b>809,700</b> | <b>506</b>                 |
| Income before interest expense    | 206,130          | 129                        | 136,767        | 81                         |
| Interest costs                    | 51,400           | 32                         | 51,400         | 32                         |
| Income before depreciation        | 154,730          | 97                         | 85,367         | 49                         |
| Depreciation                      | 110,400          | 69                         | 110,400        | 69                         |
| <b>Net farm income</b>            | <b>44,330</b>    | <b>28</b>                  | <b>-25,033</b> | <b>-20</b>                 |

<sup>1</sup> For this 1,600 acre farm, 400 acres are share-rented. On share rent acres, one-half the revenue and one-half the direct costs appears on the net income statement.

Post-COVID income is projected using 2020 cash prices of \$3.20 per bushel for corn and \$8.60 per bushel for soybeans. These prices are close to current bids for 2020 fall-delivery. As a result, crop revenue is reduced from \$1,005,830 for the pre-COVID scenario to \$890,960 for the post-COVID scenario, a decline of \$114,870 (see Table 1). A number of other changes also are incorporated into revenue:

- Coronavirus Food Assistance Program (CFAP) payments are included at \$29,187 (see *farmdoc daily*, [May 22, 2020](#)). These payments are in the process of being paid. Our estimates represent CFAP payments of 40% of 2019 production (208 bushels per acre for corn and 64 bushels per acre of soybeans).
- Marketing loss on 2019 crop. Grain held into 2020 likely was sold at lower values than that placed on year-end 2019 balance sheets. The -\$43,680 loss is based on 40% of 2019 production being sold in 2020 at a loss of \$.55 per bushel for corn and \$.65 per bushel for soybeans.

- Increase in 2019 ARC/PLC payments. Lower Market Year Average (MYA) prices will result because of the lower, post-COVID prices, increasing ARC/PLC payments for 2019. This will show as a gain on 2020 income statements because 2019 ARC/PLC payments would have been under-estimated for 2019.
- 2020 ARC/PLC payments. These payments were unlikely in the pre-COVID scenario but are likely in the post-COVID scenario. The post-COVID scenario includes \$43,000 of 2020 ARC/PLC payments. We estimate these payments at roughly \$60 per base acre for corn and \$0 per base acres for soybeans.

After considering all adjustments, gross revenue declines from \$1,015,830 for the pre-COVID scenario to \$946,467 for the post-COVID scenario, a decline of -\$69,363. Net farm income is projected to decline from \$44,330 per farm for the pre COVID-19 scenario to -\$25,033 for the post-COVID scenario (see Table 1).

### Commentary

A -\$25,053 net income would be very low, and result in negative net incomes on most Illinois grain farms. However, the -\$25,033 does not include other forms of assistance such as the Paycheck Protection Program (PPP) and Economic Injury Disaster Loan (EIDL) programs administered through the Small Business Administration (SBA). Both are loan programs, not direct payments. However, PPP loans are forgivable provided used for qualifying business expenses (see *farmdoc daily*, [April 14, 2020](#)). Though EIDL loans are not forgivable, an emergency advance portion, for those who received it, did not have to be repaid (see *farmdoc daily*, [May 12, 2020](#)). A significant number of farms have enrolled in these programs, but likely not the majority of grain farms in Illinois. Moreover, any forgivable aid from these programs likely will not be enough to cause incomes to be positive.

Also not included in the -\$25,033 is additional Federal aid currently being discussed in Congress and at the USDA. Given the above projections, additional aid at the levels of last year's MFP program would be needed to bring incomes close to 2019 levels, with last year's income levels not being at a particularly high level.

Of course, much could change projections. Favorable market news is possible, perhaps leading to higher prices. Surprises often occur in agriculture. Of course, more negative results are possible as well.

Much of 2020 income is dependent on Federal aid. More Federal aid could cause 2020 incomes to be near or above 2019 levels. More worrisome is 2021, which likely will have lower levels of Federal aid. Given recent setbacks in Coronavirus control, it seems reasonable to expect social distancing measures to be relatively long-lasting, quite possibly into next summer and beyond. If this is the case, ethanol demand could remain low, and the economy will not be in full recovery. Demand for crops could remain low going into 2021, and 2021 could be a very low-income year for Illinois grain farms.

### References

Lattz, D., B. Rhea, G. Schnitkey, K. Swanson, N. Paulson and J. Coppess. "[The Paycheck Protection Program \(PPP\) of the CARES Act.](#)" *farmdoc daily* (10):69, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, April 14, 2020.

Paulson, N., G. Schnitkey, J. Coppess, C. Zulauf and K. Swanson. "[Coronavirus Food Assistance Program \(CFAP\) Rules Announced.](#)" *farmdoc daily* (10):95, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, May 22, 2020.

Schnitkey, G., K. Swanson, J. Coppess, N. Paulson and C. Zulauf. "[MFP and CFAP Payments, Corn and Soybean Uses, and Future Farm Profitability.](#)" *farmdoc daily* (10):106, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, June 10, 2020.

Schnitkey, G., K. Swanson, T. Hubbs, C. Zulauf, N. Paulson, J. Coppess "[Estimates of MYA Prices for 2019 through 2021, Pre and Post COVID-19, Corn and Soybeans.](#)" *farmdoc daily* (10):78, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, April 28, 2020.

Swanson, K., G. Schnitkey, N. Paulson, J. Coppess and C. Zulauf. "[Pandemic Relief Update: Economic Injury Disaster Loan Program](#)." *farmdoc daily* (10):87, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, May 12, 2020.