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The yield index lease transfers very little risk to the owner because in Iowa, at least, yields have been more stable than prices in recent years.

Some flexible leases set the rent each year as a fixed percent of the gross crop income each year. As shown by the "Percent of gross" bar, this reduces the tenant's net income variability even more because the rent automatically adjusts up or down with both prices and yields. The "base plus bonus" bar represents a flexible lease in which rent is equal to a fixed base rent plus a percent of the tenant's return over production costs. By incorporating costs into the rent equation, the tenant's net return varies even less, and the sharing of risk approaches that of a 50-50 crop-share lease.

It is important to note that as landowners take on additional financial risk, their returns will increase in years of higher than expected profits as well as decrease when overall returns decline. Both owners and tenants should select a lease type that reflects their individual abilities and desires to bear risk and reap rewards, versus their needs for more stable income.

More resources on farmland rental arrangements, can be found on the [Ag Decision Maker Leasing page](http://www.extension.iastate.edu/agdm/wdleasing.html), www.extension.iastate.edu/agdm/wdleasing.html.



Agricultural professionals expect lower farmland values over the next 18 months

By Wendong Zhang, extension economist, 515-294-2536, wdzhang@iastate.edu; Mike Duffy, retired extension economist

Due to the significant uncertainty and social distancing requirements posed by the COVID-19 pandemic, the 93rd Soil Management Land Valuation (SMLV) conference, which had been postponed to August, is now cancelled.

However, one conference tradition was not broken—since 1964, conference attendees have provided estimates on land value trends and crop prices. This year, we notified attendees of the cancellation and asked them to provide their estimates in an online survey. We received short- and long-term estimates for land and crop prices from 170 agricultural professionals, which is similar to the number of responses from previous conferences. This article provides a summary of the expert projections.

Of this year's respondents, 45% are agricultural lenders, 20% are farm managers, and more than 10% each are realtors or brokers and rural appraisers. They are generally experienced agricultural professionals who have, on average, worked for 26 years and provided service for nine Iowa counties. The survey asked for land value and cash crop estimates for respondents' local service areas for four

short-term horizons – as of May 1, 2020, November 1, 2020, November 1, 2021, and November 1, 2022. In addition, respondents provided land value estimates for November 1, 2025, and November 1, 2040. For each observation, we calculated the yearly percent change from the respondent's May 2020 estimate. We did this transformation because the percentage change estimates are more transferrable than land value estimates with other data sources.

Table 1 presents the results from the 2020 survey. Overall, agricultural professionals expect a modest decline in farmland values in their local service areas over the next 18 months. In particular, they forecast an average 2.3% decline in land values from May 1 to November 1, 2020. They further expect land values to drop by 1.2% from May 1, 2020, to November 1, 2021, which shows an expected stabilization or modest increase in land values from November 1, 2020, to November 1, 2021. Furthermore, the respondents project the land market to continue to stay stable and gradually increase from 2021 to 2022.

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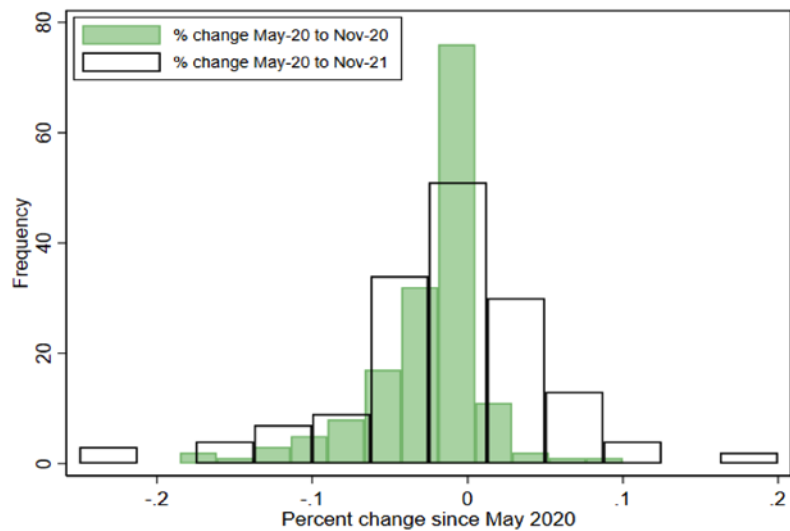
Table 1. 2020 Soil Management Land Valuation (SMLV) estimated land and crop price forecasts

Description	Observations	Mean	Standard Deviation	Min	Max
Percent change in land value from May '20 to Nov '20	163	-2.3%	4.0%	-18.5%	10.0%
Percent change in land value from May '20 to Nov '21	160	-1.2%	6.6%	-25.0%	20.0%
Percent change in land value from May '20 to Nov '22	158	0.7%	9.0%	-37.5%	40.0%
Percent change in land value from May '20 to Nov '25	158	10.4%	13.5%	-25.0%	80.0%
Percent change in land value from May '20 to Nov '40	158	44.1%	39.9%	-25.0%	260.0%
Estimated cash corn price May 1, 2020	159	\$ 2.97	\$0.17	\$2.45	\$ 3.60
Estimated cash corn price Nov 1, 2020	159	\$ 3.05	\$0.27	\$2.35	\$ 3.75
Estimated cash corn price Nov 1, 2021	150	\$ 3.35	\$0.33	\$2.00	\$ 4.25
Estimated cash corn price Nov 1, 2022	149	\$ 3.57	\$0.41	\$2.00	\$ 5.00
Estimated cash soybean price May 1, 2020	158	\$ 8.04	\$0.44	\$4.00	\$ 9.35
Estimated cash soybean price Nov 1, 2020	158	\$ 8.21	\$0.54	\$5.00	\$10.00
Estimated cash soybean price Nov 1, 2021	149	\$ 8.64	\$0.79	\$3.00	\$12.00
Estimated cash soybean price Nov 1, 2022	148	\$ 9.05	\$1.04	\$3.25	\$15.00

Figure 1 reveals more heterogeneity in the short-term land price forecasts by showing the distribution for the two most recent land price forecasts over the next 18 months across surveyed agricultural professionals. Notably, almost half of respondents expect no change in their local land values over the next six months. Another 15% and 12% of respondents expected a decline of less than 3% or a 3%–5% drop, respectively. In contrast, only 10% of surveyed respondents expect a higher land value six months later. Compared to the forecast from last year’s conference, most agricultural professionals expected a stable land market throughout 2020. Most respondents cited lower commodity prices as the key reason for their forecast of modest decline, followed by agricultural trade uncertainty, especially with China, and the uncertainty surrounding the COVID-19 pandemic, including the lack of a viable vaccine.

The projected declines are consistent with other surveys. For example, the [Purdue Ag Economy Barometer](https://ag.purdue.edu/commercialag/ageconomybarometer/covid-19-continues-to-impact-farmer-sentiment-majority-indicate-economic-assistance-bill-necessary/), <https://ag.purdue.edu/commercialag/ageconomybarometer/covid-19-continues-to-impact-farmer-sentiment-majority-indicate-economic-assistance-bill-necessary/>, a monthly telephone

Figure 1. The distribution of estimated price changes from May 2020 to November 2020 and November 2021



survey of farmer sentiment based on 400 US agricultural producers, reports that in May 2020, the Current Conditions index regarding agricultural economy was 46% lower than three months earlier. Furthermore, the share of farmers expecting lower farmland prices a year later rose from 13% in January 2020 to about 33% in April and May 2020, while the percent of farmers expecting higher farmland prices 12 months ahead dropped from 16% to less than 10% during the same period.

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Figure 1 also shows that respondents are slightly more optimistic about the land market outlook 18 months from now compared to the immediate future. The share of agricultural professionals who expect a higher land value 18 months from now increased to almost 40%, while the most frequent answer is still “no change” when comparing land values now to in 18 months. The respondents cited lower interest rates, good crop yields, and strong demand amid tight land supply as main factors driving up land values. A [comparison](http://www2.econ.iastate.edu/faculty/zhang/smlv/2017/Zhang_SMLV_Introduction_2017.pdf), www2.econ.iastate.edu/faculty/zhang/smlv/2017/Zhang_SMLV_Introduction_2017.pdf, (Slides 14-15) of the SMLV 6-month and 18-month land price forecasts with land value estimates reported later by the Iowa State University land value survey shows that overall the forecasts are accurate, and the discrepancy slightly increases when the forecast horizon is more distant.

Put simply, land value equals income divided by interest rate. Recent drastic cuts by the Federal Reserve to combat COVID-19 economic uncertainties have resulted in a near-zero federal funds rate and a reduction of average farmland loan rates from 5% to 4.5% or lower. [Our recent research](http://www2.econ.iastate.edu/faculty/zhang/publications/working-papers/Basha_Zhang_Hart_2020_Interest_Rate_Land_Value.pdf) (www2.econ.iastate.edu/faculty/zhang/publications/working-papers/Basha_Zhang_Hart_2020_Interest_Rate_Land_Value.pdf) supports the respondents’ observations on the supporting role of lowered interest rates in land values, and shows that the large cut in the interest rate in 2020 will fully offset the 2015–2018 interest rate hikes made by the Federal Reserve. The peak impact from the 2020 cut will reveal itself in 2021, adding roughly 4% to land values, which will overwhelm the remaining impact from the 2015–2018 hikes. More importantly, the 2020 rate cut will dominate the interest rate impact for the foreseeable future and the net effects of interest rate changes on farmland values will become positive, beginning in 2021.

The surveyed respondents have a rosier outlook for long-run land values—in particular, they expect, on average, a 10% increase in land values from May 2020 to November 2025, and a 45% increase in land values from May 2020 to November 2040. This echoes the fact that farmland is typically a long-term investment, with half of land in Iowa held by the same owner for over 20 years, as shown in the 2017 Iowa Farmland Ownership and Tenure Survey.

Table 1 also presents the respondents’ average statewide forecasts of cash corn and soybean prices for May 2020, November 2020, November 2021, and November 2022. On average, the respondents expect the November 2020 cash corn and soybean prices at \$3.05/bushel and \$8.21/bushel, respectively. Furthermore, they expect the cash prices to increase slightly to \$3.57/bushel and \$9.05/bushel for corn and soybean, respectively, two years from now. It is worth noting that the respondents expect a much higher jump for cash soybean prices from November 2020 to November 2022. This may implicitly reflect how respondents anticipate improvements in soybean trade with China.

Note that the cash prices forecasted reflect a basis consideration (cash minus the nearby futures contract price), which, during the month of November in Iowa, could mean cash prices \$.20–\$.50/bushel for corn and \$.50–\$1.00/bushel for soybean below the futures prices at harvest. These futures contracts tend to be December for corn and November for soybean, respectively. In addition, the respondents are more pessimistic due to COVID-19 uncertainties, and these short-term commodity price forecasts for November 2020 are about \$.60/bushel and \$.40/bushel lower for corn and soybean, respectively, when compared to their predictions in May 2019.

Finally, respondents provided cash rent estimates for the corresponding time-period, for which we calculate the gross capitalization rates for the land market as respondents’ gross cash rent estimates divided by land value estimates. We also group all individual counties into one of the four quadrants across Iowa and calculate the regional-average short-, medium-, and long-term land value estimates. Table 2 presents these regional-specific land value percent changes and gross capitalization rates. The general trends in land market outlooks across regions are similar, with professionals in southern Iowa, especially in Southeast Iowa, being slightly optimistic.

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Table 2. 2020 SMLV estimated land price forecasts and gross capitalization rate for land value across Iowa regions

	Northwest	Northeast	Southwest	Southeast	STATE
Percent change in land value from May '20 to Nov '20	-2.7%	-2.5%	-2.3%	-1.6%	-2.3%
Percent change in land value from May '20 to Nov '21	-2.1%	-1.4%	-0.6%	0.0%	-1.2%
Percent change in land value from May '20 to Nov '22	-0.7%	0.6%	1.7%	2.6%	0.7%
Percent change in land value from May '20 to Nov '25	10.2%	9.2%	13.1%	10.3%	10.4%
Percent change in land value from May '20 to Nov '40	41.8%	47.5%	43.0%	46.5%	44.1%
	Northwest	Northeast	Southwest	Southeast	STATE
Gross capitalization rate May 1, 2020	2.8%	3.2%	3.5%	3.3%	3.2%
Gross capitalization rate Nov 1, 2020	2.8%	3.2%	3.5%	3.3%	3.1%
Gross capitalization rate Nov 1, 2021	2.8%	3.2%	3.5%	3.3%	3.1%
Gross capitalization rate Nov 1, 2022	2.8%	3.2%	3.4%	3.3%	3.1%
Gross capitalization rate Nov 1, 2025	2.8%	3.2%	3.4%	3.3%	3.1%
Gross capitalization rate Nov 1, 2040	2.8%	3.1%	3.3%	3.1%	3.1%

Table 2 also shows that the respondents expect the gross capitalization rates to be stable at around 3.1%–3.2% from now to 2040. In other words, respondents expect cash rent to rise or decrease at the same pace as land values. It is worth noting that the projected capitalization rates for Northwest Iowa, in part, reflect the higher land prices and more competitive nature in the land market.

The COVID-19 situation is highly fluid and uncertain, which makes land and crop price forecasts

like ours particularly challenging. However, despite the projected modest declines, most respondents expect to see a relatively steady land market in the foreseeable future. This is in contrast with much more steep drops in commodity prices and farm income, especially for livestock producers, amid intensifying concerns related to COVID-19.

We look forward to the next SMLV conference to be held in Ames on Wednesday, May 12, 2021.



Some positive news for a change

By Chad Hart, extension economist, 515-294-9911, chart@iastate.edu

The June Acreage and Grain Stocks reports often create a lot of market buzz, usually in the downward direction. But this year's reports provided a positive lift for a change. While corn disappearance did decline dramatically this spring, corn stocks on June 1 were roughly the same as they were in 2019. Soybean stocks were 22% lower this year. And while acreage was up for both corn and soybean this year, compared to last year, the increases were not big as the markets anticipated. So short-term supplies are at or below last year's levels and long-term supply projections are now smaller than first feared. Combine that with some positive signs on the

demand side with ethanol plants continuing to bring back production and some movement on soybean export sales, and both the corn and soybean markets gain 10 to 20 cents.

In looking at the reports, let's start with what was the most bearish piece of news in the reports, the drop in corn disappearance. The markets already knew disappearance had fallen; the question was how much. The stocks report gave us the answer, at roughly 700 million bushels over the last three months. The closures within the ethanol industry explain the lion's share of the reduction.