

Farm Finances and Government Programs

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Pro-Ag Outlook and Management
Ag Decision Maker Webinar Series
December 8, 2020

Overview

- Farm financial situation in early 2020
- Costs of crop production in 2020
- Cash revenues in 2020
- How is 2021 shaping up?

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Average Net Farm Income increased in 2019...

Mid-size Iowa farms with Gross Revenue > \$100,000

(accrual, not adjusted for inflation)

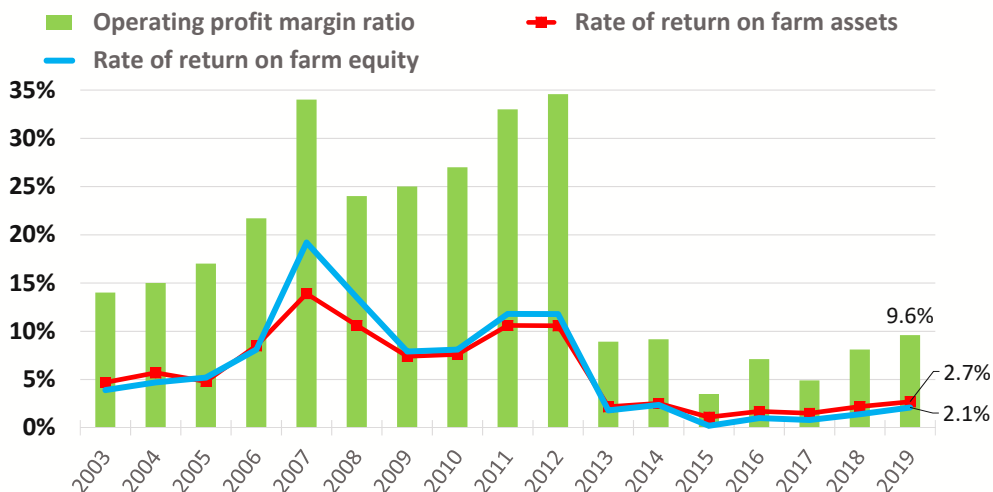


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Source: Iowa Farm Costs and Returns.
Ag Decision Maker File C1-10. Various years.
Based on data from Iowa Farm Business Association

...but Farm Profitability remained subdued

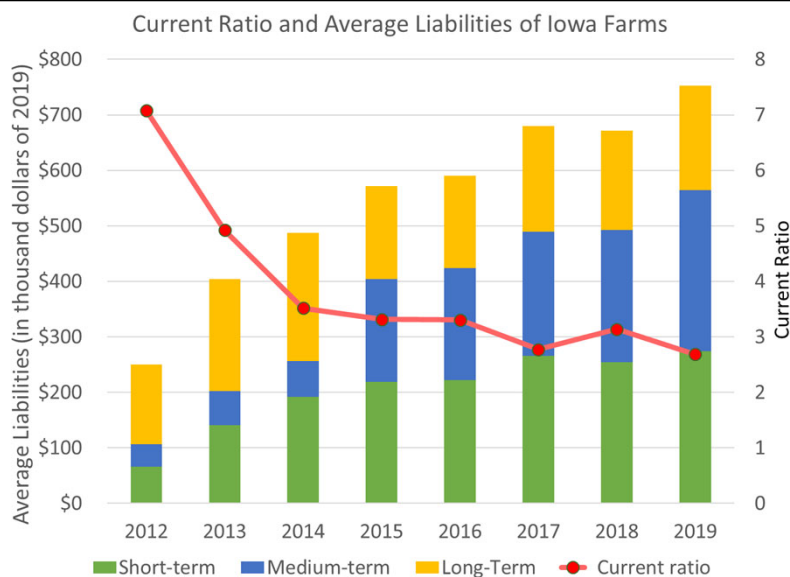


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Source: Iowa Farm Costs and Returns.
Ag Decision Maker File C1-10. Various years.
OPMR = (Accrual Net Farm Income + Interest - Unpaid labor) / Gross revenue

...and non-real estate farm debt increased, and liquidity declined...

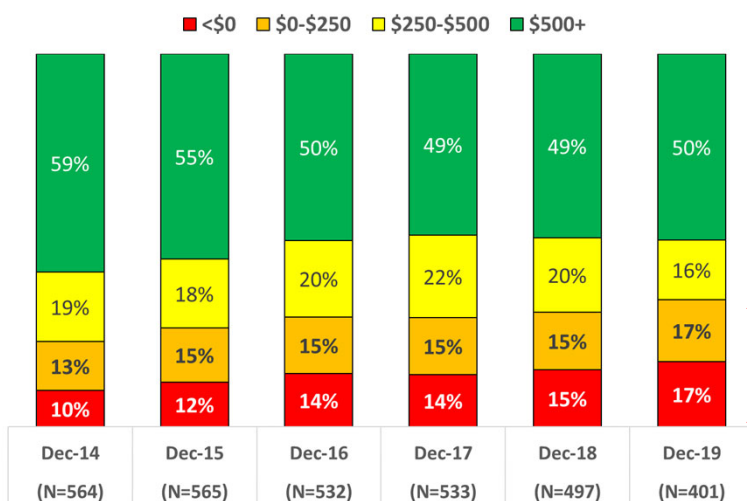


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Source: *Iowa Farm Costs and Returns*.
Ag Decision Maker File C1-10. Various years.
Based on data from Iowa Farm Business Association

Distribution of Working Capital per Acre



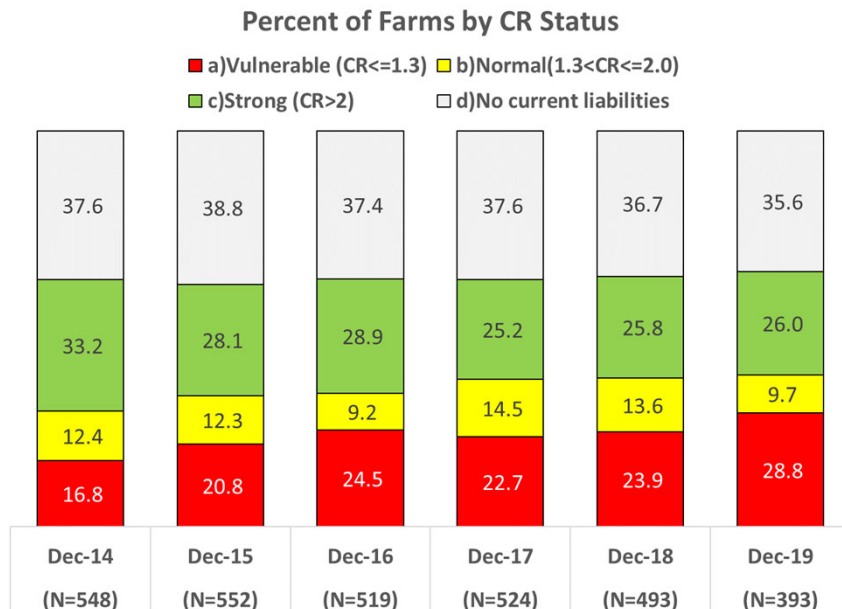
1 in 3 Iowa Farms had less than \$250 in working capital per acre in early 2020...

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Source: Plastina, A. "Mixed liquidity results for Iowa farms in 2019." AgDM Newsletter, June 2020.

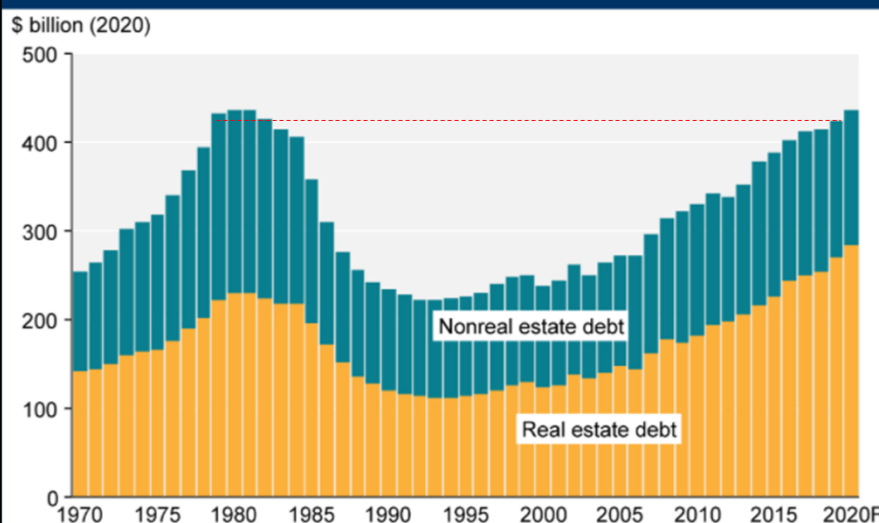
**...and also a
Vulnerable
Current Ratio**

**→ Weak
Liquidity**



Source: Plastina, A. "Mixed liquidity results for Iowa farms in 2019." AgDM Newsletter, June 2020.

Farm sector debt, inflation adjusted, 1970–2020F

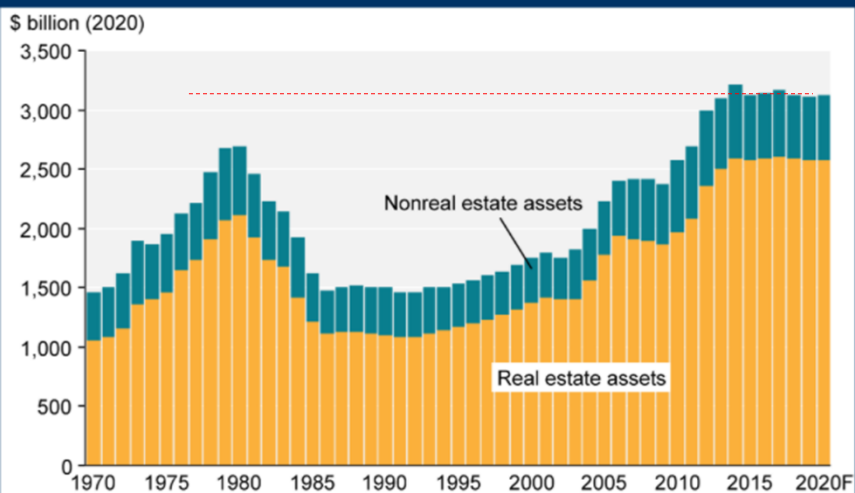


Note: F = forecast. Values are adjusted for inflation using the Gross Domestic Product chain-type price index, 2020=100.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of December 2, 2020.

**Farm debt
increased
at the
national
level too,
reaching
1980's
levels...**

But Farm Assets are much higher than in the 1980's... due mostly to land values

Farm sector assets, inflation adjusted, 1970–2020F

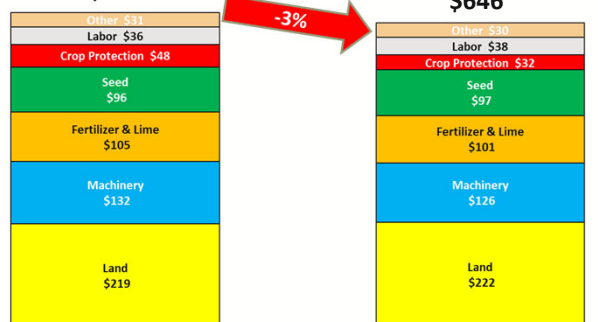


Note: F = forecast. Values are adjusted for inflation using the Gross Domestic Product chain-type price index, 2020=100.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of December 2, 2020.

2020 Projected Costs of crop production on rented land 3% lower than in 2019

Corn following soybeans (199 bu/a)

\$668

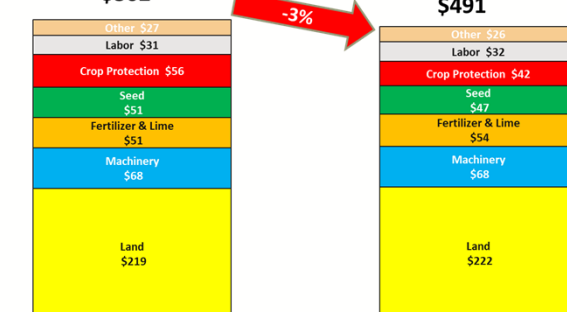


2019

2020

Soybeans following corn (56 bu/a)

\$502



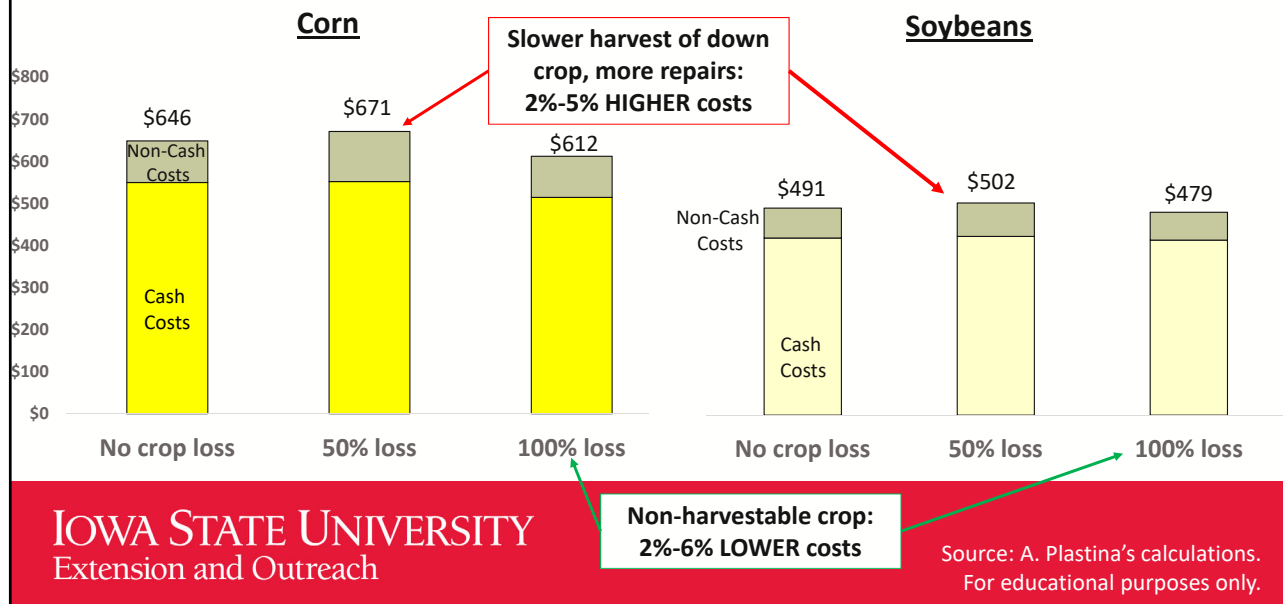
2019

2020

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Source: Cost projections from AgDM File A1-20 (Jan 2020) adjusted with cash rents from AgDM File C2-10 (May 2020).

...but Actual Costs depend on Crop Losses (projected \$ per acre for 3 case study farms)



Cash income in 2020?

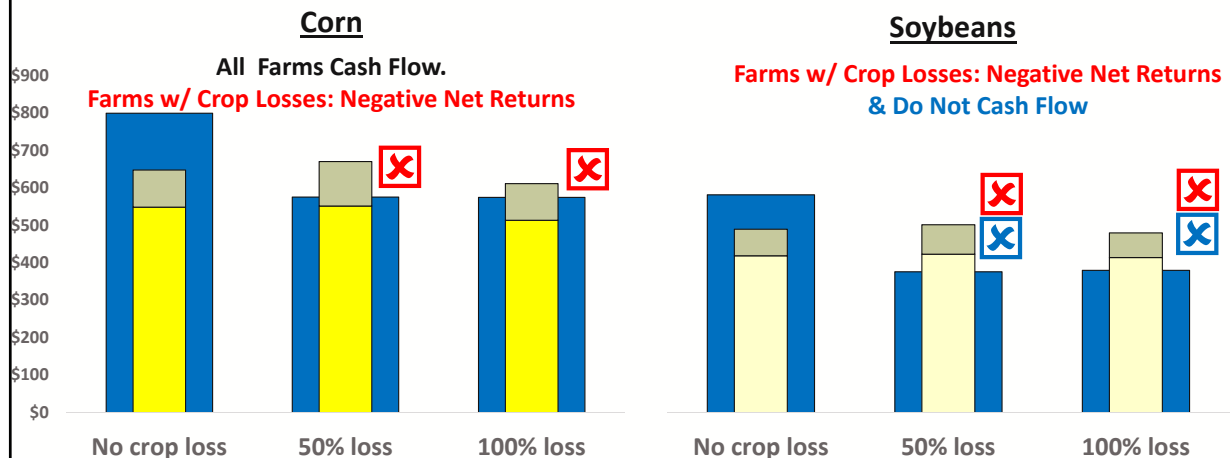
- 1) Cash Receipts from Crop Sales
- 2) Crop Insurance
- 3) ARC/PLC Payments in 2020 from 2019 crop
- 4) Multiple ad-hoc programs:
 - 3rd batch of Market Facilitation Payments (MFP)
 - Coronavirus Food Assistance Program 1 (CFAP 1)
 - CFAP 2
 - Forgiveness of Paycheck Protection Program (PPP) Loans
 - Stimulus payments
 - State Grants (Relief funds, Capacity expansion, etc.)

2020 Cash Receipts & Crop Insurance (per Acre)

Source of Revenue from Corn Acres	No Crop Loss 200 bu	50% Crop Loss 100 bu	Unharvestable Crop (100% Loss)
Cash Receipts (WASDE \$4.00)	\$800	\$400	\$0
Gross Indemnity (RP 80%; APH 180 bu; \$3.88 projected; \$3.99 harvest)	\$0	\$176	\$575
Sub-Total per Acre	\$800	\$576	\$575

Source of Revenue from Soybeans Acres	No Crop Loss 56 bu	50% Crop Loss 28 bu	Unharvestable Crop (100% Loss)
Cash Receipts (WASDE \$10.40)	\$582	\$291	\$0
Gross Indemnity (RP 80%; APH 45 bu; \$9.17 projected; \$10.55 harvest)	\$0	\$84	\$380
Sub-Total per Acre	\$582	\$375	\$380

Cash Receipts & Crop Insurance vs. Total Costs in 2020



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Poll

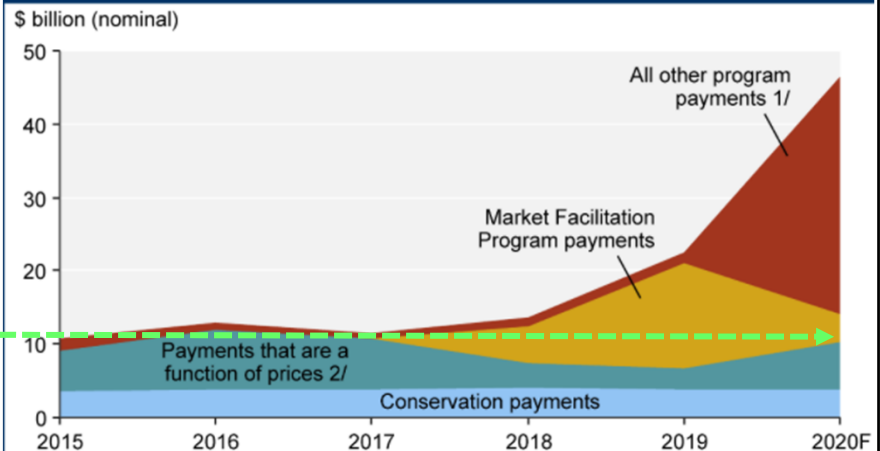
Source: A. Plastina's calculations.
For educational purposes only.

Government payments more than doubled in 2020 to \$46.5 billion

... of which 78% or \$36B were AD-HOC

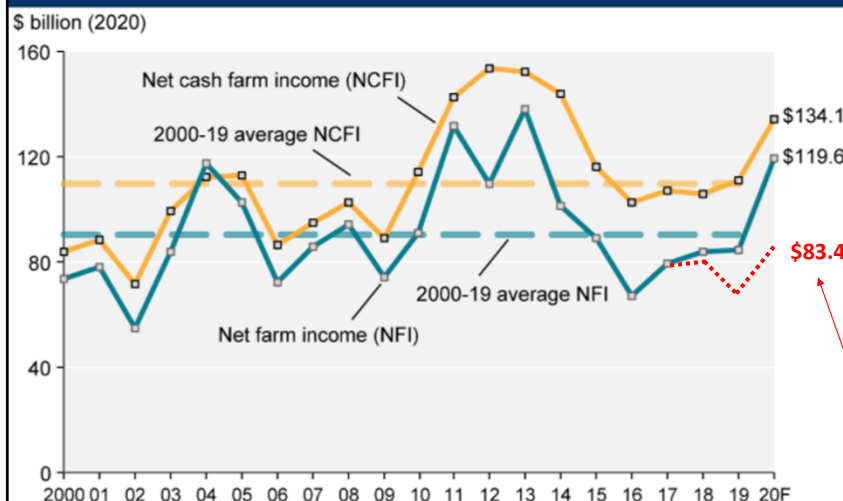
ARC/PLC & Conservation Pmts. alone: \$6.8 B in 2019, \$10.3 B in 2020.

Direct government payments to farm producers, 2015-20F



Note: F = forecast. 1/ "All other program payments" includes supplemental and ad hoc disaster assistance, which in 2020 includes payments from Coronavirus Food Assistance Programs and the Paycheck Protection Program. 2/ Includes Price Loss Coverage, Agriculture Risk Coverage, loan deficiency payments (excluding grazeout payments), marketing loan gains, certificate exchange gains, and dairy payments. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of December 2, 2020.

Net farm income and net cash farm income, 2000-20F



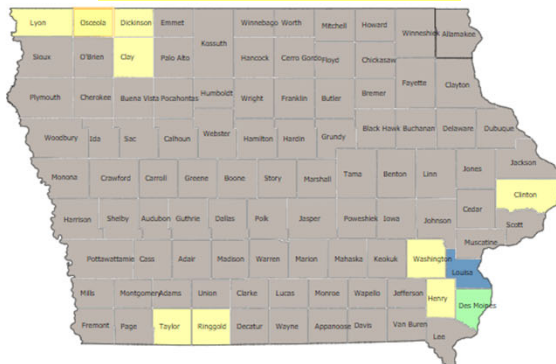
Note: F = forecast. Values are adjusted for inflation using the Gross Domestic Product chain-type price index, 2020=100. Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of December 2, 2020.

Net Farm Income in 2020 will be 41% or \$35B higher than in 2019

Without AD-HOC Payments, NFI'20 = \$83.4B, or 30% lower

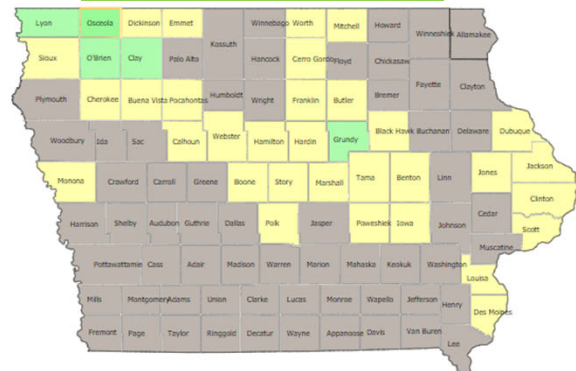
ARC-CO payments per Base Acre in 2020 for the 2019 crop year

Corn Base Acres
Average ARC-CO Payment
\$1.60 per acre



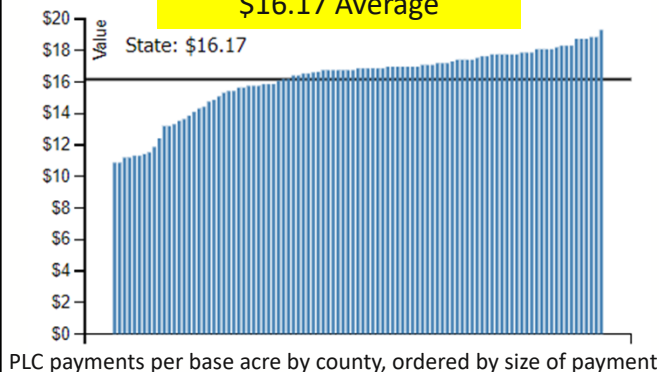
N.A. 0\$ \$1 - \$25 \$25 - \$50 \$50 - \$75 \$75 - \$100

Soybean Base Acres
Average ARC-CO Payment
\$5.00 per acre



PLC payments per acre in 2020 for the 2019 crop year

Corn Base Acres
PLC payments
\$16.17 Average



Soybean Base Acres
No PLC payments

ARC-CO & PLC do not depend on planted acres, but Base Acres.

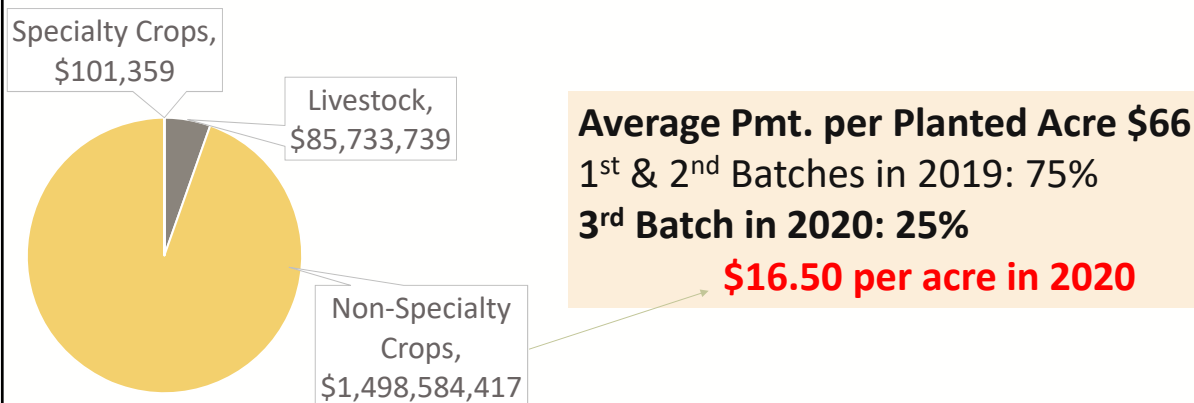
ARC/PLC average 2020 payment for Case Study Farms:

$\frac{2}{3} * \$16.17$ (PLC Corn) + $\frac{1}{3} * \$5.00$ (ARC-CO Soy) = \$12.45 /acre

Selected Ad-Hoc Programs with Payments in 2020

- **Market Facilitation Program (MFP): \$14.5 billion** in direct support for losses caused by Trade Disruption in 2018 and 2019 (paid in 2019 and 2020)
- **Coronavirus Food Assistance Program (CFAP 1): \$16 billion** in direct support for actual losses in the 2020 marketing year caused by COVID-19 (paid in 2020).
- **CFAP 2: \$14 billion** in direct support for increased marketing costs associated with the COVID-19 pandemic in 2020 (payment started in October 2020).
- **Paycheck Protection Program (PPP) Loan:** \$5.2 million loans, with \$525 billion in proceeds disbursed to small businesses (not only farms) for COVID-19.

Total MFP Payments in Iowa \$1.6 Billion (11% of national MFP Payments)



Average Pmt. per Planted Acre \$66

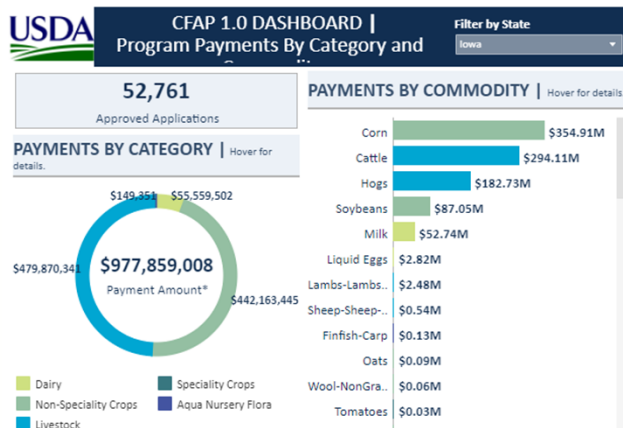
1st & 2nd Batches in 2019: 75%

3rd Batch in 2020: 25%

\$16.50 per acre in 2020

Source: Farmers.gov
September 28, 2020

CFAP 1 Approved Payments in Iowa as 12/6/20 Highest in the Nation (9% of total)



Case Study Farms

Assume:

1) 2019 Yields:

Corn 200 bu

Soybeans 56 bu

2) 50% of 2019 crop unsold in 2020

CFAP 1 payment per acre in 2020:

Corn: 100 bu x \$0.335 x 50% = **\$16.75/a**

Soy: 28 bu x \$0.475 x 50% = **\$6.65/a**

CFAP 2 for Corn and Soybeans

CORN: the greater of:

- A. Crop acreage × \$15 per acre; OR
- B. Crop acreage × \$0.232 per bushel × producer's weighted 2020 Actual Production History (APH) approved yield.

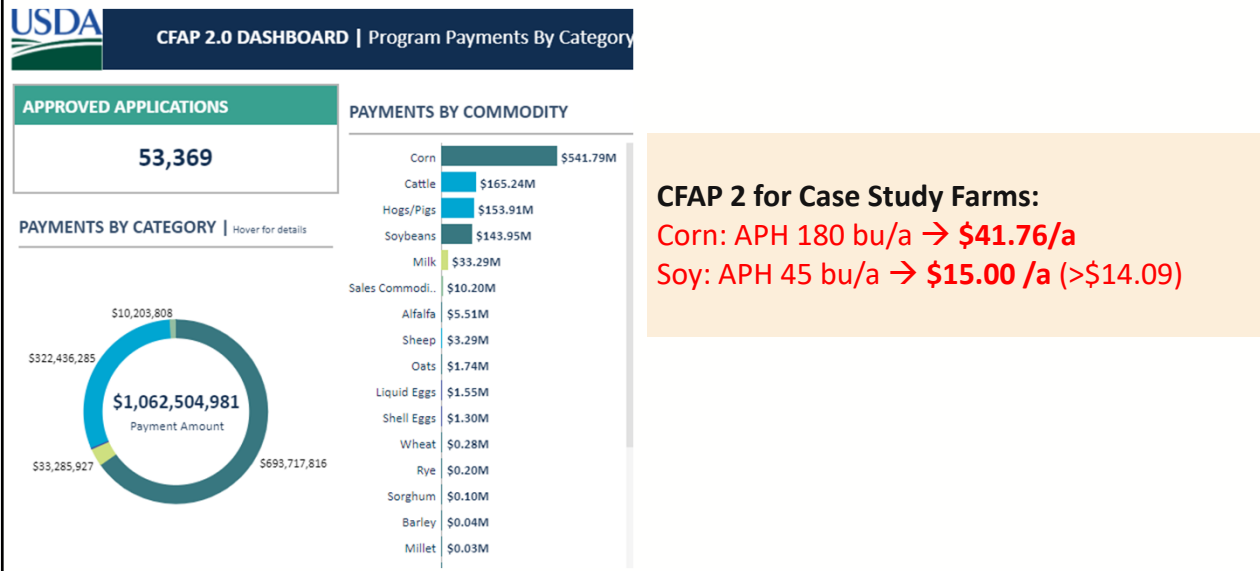
SOYBEANS: the greater of:

- A. Crop acreage × \$15 per acre; OR
- B. Crop acreage × \$0.3132 per bushel × producer's weighted 2020 APH approved yield.

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*USDA is accepting applications for CFAP 2 until December 11, 2020. Paid \$11.15 billion (80%) by 11/29/20

CFAP 2 Approved Payments in Iowa as 12/6/20 Highest in the Nation (9% of total)



Paycheck Protection Program (PPP) Loan Forgiveness

- When forgiven, the proceeds of the PPP loan are not included in gross income and will not be subject to taxation.
- Expenses paid with the loan (if it is forgiven) are not deductible.
- There is broad support for Congress to change this rule, but it is unclear whether that will happen.

Source: <https://www.calt.iastate.edu/blogpost/end-year-considerations-unprecedented-year>

Forgiveness of PPP Loans

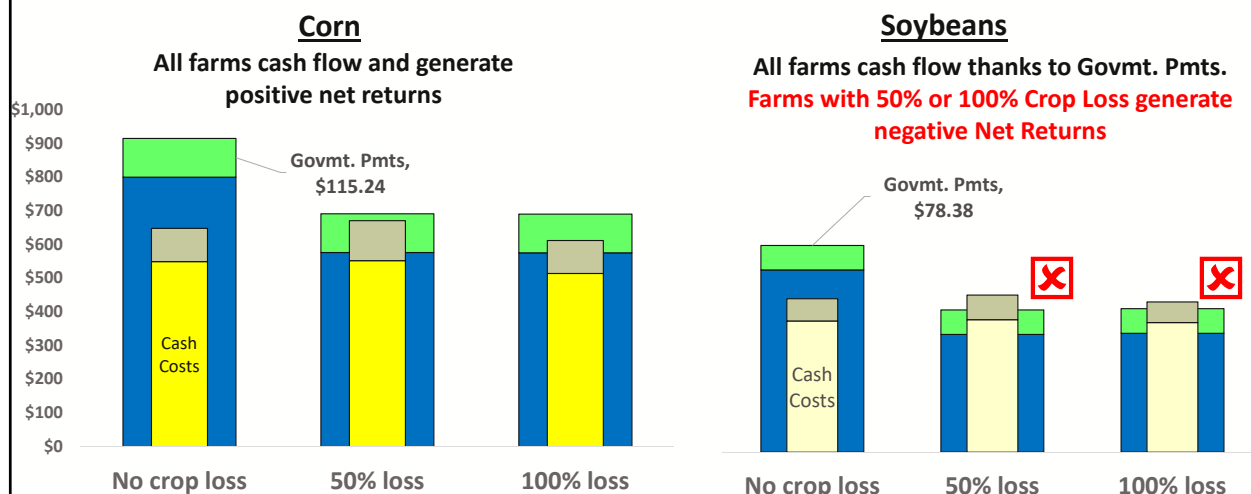
Maximum forgiveness (currently under review):

- cash compensation up to \$20,833 per owner
 - sole proprietors: no tax obligation if taken as a “draw” from farm bank account;
 - corporations: higher taxable income, since paid expenses with forgiven PPP \$ are not deductible from net farm income calculation
- cash compensation up to \$46,154 per non-owner employee
 - If paid with forgiven loan proceeds, this payroll expense is not currently deductible

Case Study Farms: assume SP w/ 750 acres and cash compensation of \$20,833 → govmt. pmt. = \$27.78 per acre

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ALL Cash Revenues vs. Total Costs in 2020



Government Payments per Acre:

Corn: \$12.45 ARC-CO&PLC + \$16.5 MFP + \$16.75 CFAP1 + \$41.76 CFAP2 + \$27.78 PPP = \$115.24

Soy: \$12.45 ARC-CO&PLC + \$16.5 MFP + \$ 6.65 CFAP1 + \$15.00 CFAP2 + \$27.78 PPP = \$ 78.38

Source: A. Plastina's calculations. For educational purposes only.

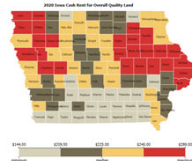
Local conditions will be different...

- Crop damage, combining speed & direction
- Actual ARC/PLC payments



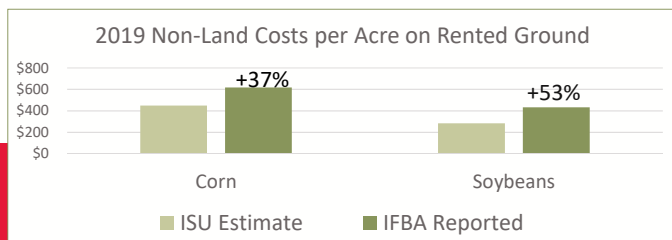
<https://www.card.iastate.edu/tools/farm-bill/arc-plc/>

- Owned vs. rented
- Cash rents
- Actual Yields
- Unsold crop in early 2020
- Other ...



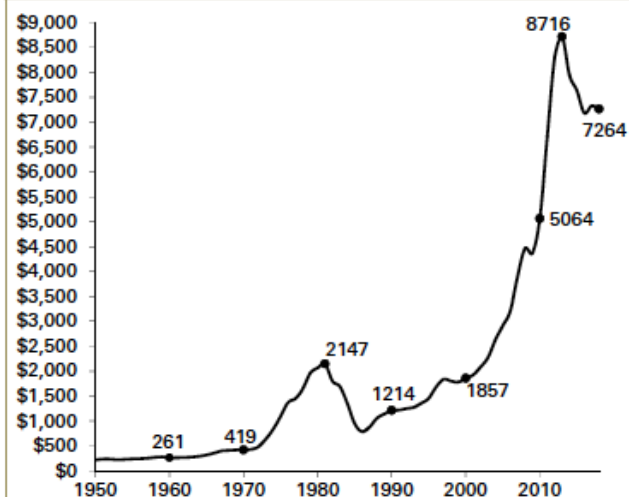
<https://www.card.iastate.edu/tools/ag-risk/cash-rental-rates/>

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Iowa farmland values support the solvency of owner-operators

Figure 1. Average value per acre of Iowa farmland



Source: Iowa State University Land Value Survey

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...who account for 37% of all Iowa Farmland

	Percent	Acres
Owner Controlled:	47%	13,851,567
Owner operated	37%	10,819,245
Custom farmed	2%	583,485
Gov't programs and other uses	8%	2,448,837
Leased:	53%	16,771,192
Cash rent (fixed)	35%	11,502,256
Cash rent (flexible)	9%	2,354,117
Crop share	9%	2,875,316
Other types of leases	<1%	39,503
Total:	100%	30,622,759

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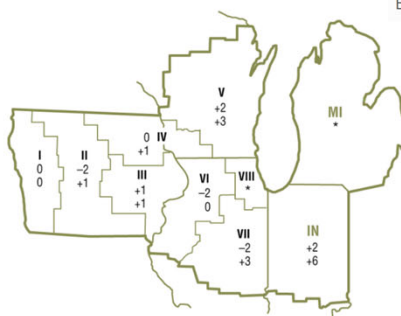
Source: 2017 Iowa Farmland Ownership and Tenure Survey.
<https://store.extension.iastate.edu/product/6492>

Higher Land Values Strengthen their Balance Sheet...

Percent change in dollar value of "good" farmland

	July 1, 2020 to October 1, 2020	October 1, 2019 to October 1, 2020
Illinois	-2	+2
Indiana	+2	+6
Iowa	0	+1
Michigan	*	*
Wisconsin	+1	+3
Seventh District	0	+2

*Insufficient response.



Top: July 1, 2020 to October 1, 2020

Bottom: October 1, 2019 to October 1, 2020

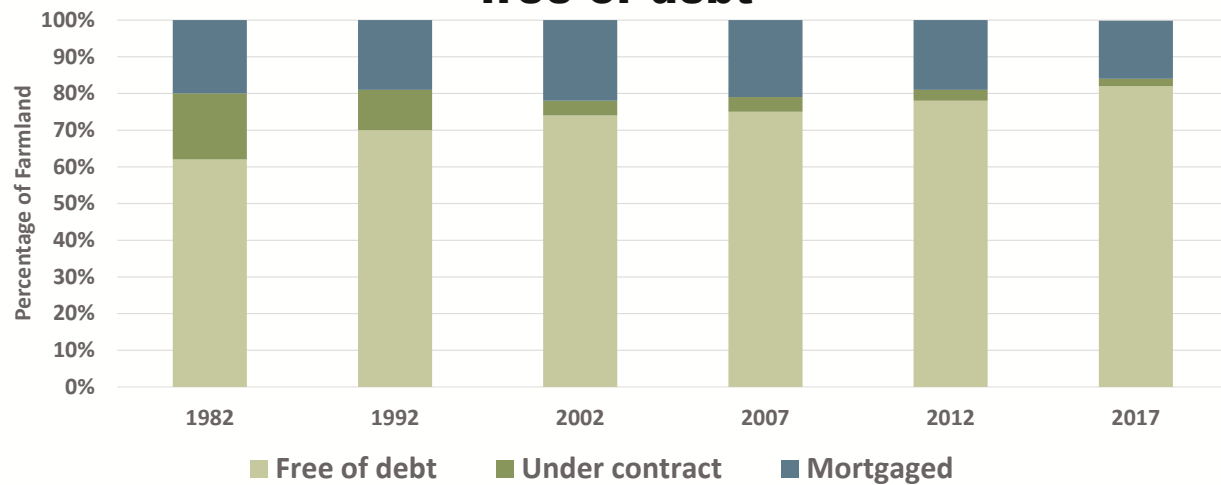
AgLetter, No. 1990, November 2020

AgLetter: November 2020

By David Oppedahl

FEDERAL RESERVE BANK of CHICAGO

...particularly since 82% of Iowa Farmland is owned free of debt



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Source: 2017 Iowa Farmland Ownership and Tenure Survey.
<https://store.extension.iastate.edu/product/6492>

Overall, by Dec 2020 we can expect:

- Stronger Liquidity, Solvency, and Repayment Capacity than in Jan 2020,
- Due to Higher Net Farm Income in 2020 (stronger crop prices at harvest time and massive government payments)

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However, higher land values put upward pressure on land rents (leased ground 53% of all Iowa Farmland)

	Percent	Acres
Owner Controlled:	47%	13,851,567
Owner operated	37%	10,819,245
Custom farmed	2%	583,485
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Source: 2017 Iowa Farmland Ownership and Tenure Survey.
<https://store.extension.iastate.edu/product/6492>

Fertilizer Prices strong into 2021: Urea (Granular) FOB US Gulf Futures (CEM)

**Dec 2020 Contract:
March-December 2020**



**March 2021 Contract:
April-December 2020**



Energy Prices forecast higher in 2021

West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals
dollars per barrel



Note: Confidence interval derived from options market information for the five trading days ending Nov 5, 2020. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, November 2020, CME Group, and Bloomberg, L.P.



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	2018	2019	2020	2021
WTI Crude Oil ^a (dollars per barrel)	65.07	56.99	38.24	44.24
Brent Crude Oil (dollars per barrel)	71.21	64.34	40.61	46.59
Gasoline ^b (dollars per gallon)	2.73	2.60	2.15	2.22
Diesel ^c (dollars per gallon)	3.18	3.06	2.53	2.56
Heating Oil ^d (dollars per gallon)	3.01	3.00	2.43	2.47
Natural Gas ^d (dollars per thousand cubic feet)	10.46	10.46	10.59	10.90
Electricity ^d (cents per kilowatthour)	12.87	13.01	13.10	13.22

^aWest Texas Intermediate.

^bAverage regular pump price.

^cOn-highway retail.

^dU.S. Residential average.

12/7/2020

2021 AD-HOC Government Payments unlikely to be as high as in 2020



Congress must end blank check to use on government farm subsidies

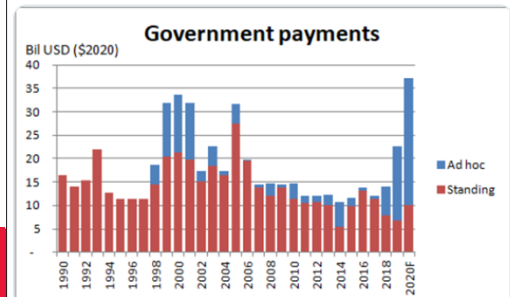
BY VINCENT SMITH AND JOSEPH GLAUBER, OPINION CONTRIBUTOR -- 07/23/20 03:00 PM EDT
THE VIEWS EXPRESSED BY CONTRIBUTORS ARE THEIR OWN AND NOT THE VIEW OF THE HILL

USDA Chief Economist 2008-2014

Tweet

JoeGlauber--IFPRI
@JoeGlauber1

Chart shows farm payments since 1990 adjusted for inflation. Last time ad hoc payments were this high was 1999-2001. One of the consequences of that period was the Brazil cotton case.



7:55 AM · Sep 30, 2020 · Twitter Web App

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Questions? Comments?

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<https://bit.ly/2FkVMBo>

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Tax Management Resources

- End-of-Year Considerations for an Unprecedented Year:
<https://www.calt.iastate.edu/blogpost/end-year-considerations-unprecedented-year>
- IRS Says No 2020 Deduction if PPP Forgiveness Reasonably Expected in 2021:
<https://www.calt.iastate.edu/blogpost/end-year-considerations-unprecedented-year>

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