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Ag Decision Maker

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Projected ARC/PLC payments in 2020

By Alejandro Plastina, extension economist, 515-294-6160, plastina@iastate.edu

Iowa corn and soybean farmers are projected to receive about $212 million in total from the Agricultural Risk Coverage (ARC) and the Price Loss Coverage (PLC) programs in October 2020 for the 2019 marketing year. About 80% of the payments will go to corn base acres and 20% to soybean base acres. Farms located the northern third of the state will receive about 45% of the payments, while farms in the southern third of the state will receive about 14% of the payments.

Big swings from ARC to PLC

The 2018 Farm Bill introduced multiple changes to the formulas used in the calculation of the ARC and the PLC programs, and eliminated the restriction that producers had to stick with one program for the life of the Farm Bill.

In the spring of 2020, the prospect of average 2019/20 and 2020/21 marketing year corn prices below $3.70 (the reference price in PLC), convinced many farmers to switch corn base acres from ARC-County (ARC-CO) to PLC. At the national level, the share of corn base acres in ARC-CO dropped from 91% in 2014-2018 to 19% in 2019-2020. At the same time, the share of corn base acres in PLC increased from 9% in 2014-2018 to 75% in 2019-2020, and ARC-Individual (ARC-IC) increased from 0% to 6%. ARC-IC became an interesting option for farms that suffered flooding in 2019 or that expected floods in 2020.

Although farmers also switched soybean base acres from ARC-CO into PLC in the spring of 2020, the drop in the share of ARC-CO acres was not as substantial as with corn: from 96% in 2014-2018 to 80% in 2019-2020 nationally. The relatively smaller reallocation of acres across programs for soybeans can be traced back to expected soybean prices at the time of program election staying above the $8.40 per bushel used as the reference price in PLC.

ARC-CO payments per base acre

We project ARC-CO payments in October 2020 to range from $0 to $49 per corn and soybean base acres on non-irrigated farms (Figures 1 and 2).

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Handbook updates

For those of you subscribing to the handbook, the following updates are included.

2020 Corn and Soybean Commodity Loan Rates – A1-34 (2 pages)

Iowa Farmland Rental Rates, 1994-2020 (USDA) – C2-09 (1 page)

Please add these files to your handbook and remove the out-of-date material.

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Projected ARC/PLC payments in 2020, continued from page 1

The estimated payments assume a 6.8% sequestration. Four counties will receive ARC-CO payments for both corn and soybean base acres, three counties will receive payments for corn base acres only, and 36 counties will receive payments for soybean base acres only (highlighted in bold in Table 1).

Another change introduced by the 2018 Farm Bill was to differentiate between irrigated and non-irrigated farms. Twenty-four counties in Iowa have irrigated corn or soybean base acres approved for ARC-CO. For irrigated farms, the projected ARC-CO payments in October 2020 range from $0 to $50 per base acre, after sequestration. Two counties will receive ARC-CO payments for irrigated soybean and corn acres, one county will receive payments only for irrigated corn acres, and five counties will receive payments only for irrigated soybean base acres (highlighted in bold in Table 2).

Payments are calculated by comparing the 2019/20 projected county crop revenues against the ARC-CO benchmark revenues. The 2019/20 projected county crop revenues are obtained as the product of the 2019 final area yields for the Supplemental Coverage Option (SCO) published by the USDA Risk Management Agency (RMA) and the projected 2019/20 marketing year average prices from the August 2020 USDA WASDE report. Benchmark revenues are calculated using the 2013/14-2017/18 trend-adjusted yields from RMA and marketing-year average prices from the USDA Farm Service Agency (FSA).

Figure 1. Projected ARC-CO payments per corn base acre (non-irrigated) in October 2020*

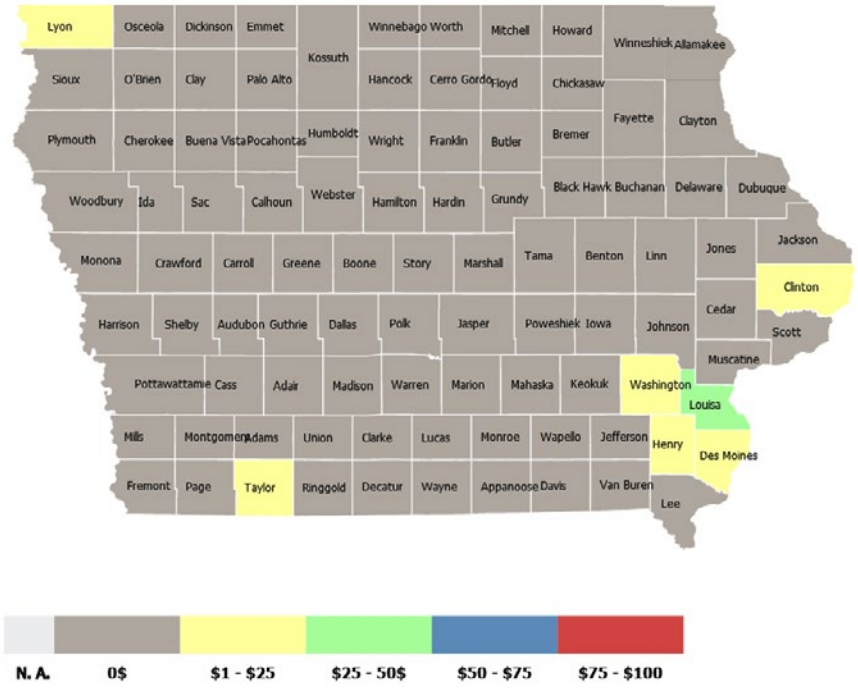
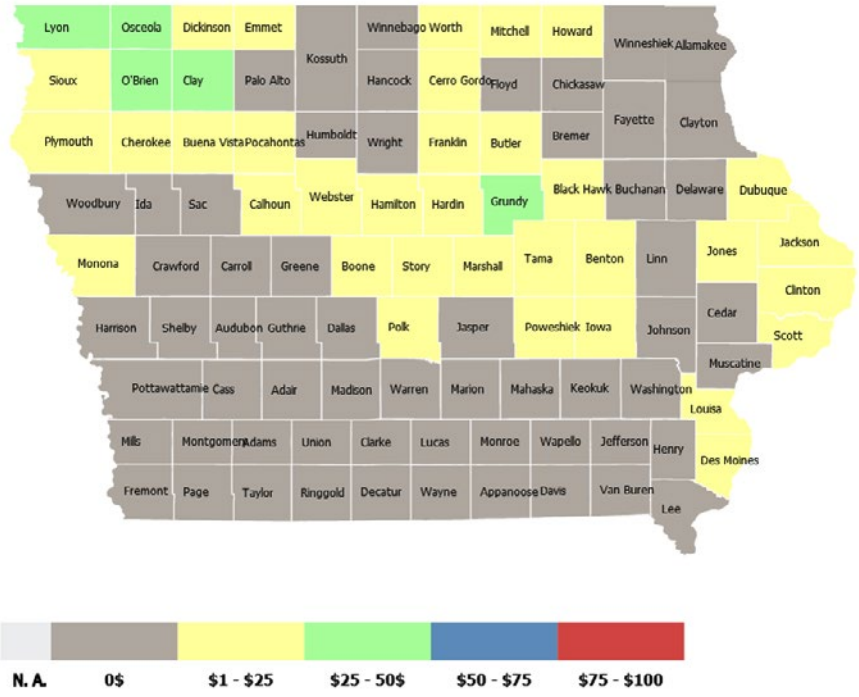


Figure 2. Projected ARC-CO payments per soybean base acre (non-irrigated) in October 2020*



*Source: https://www.card.iastate.edu/tools/farm-bill/arc-plc/

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Projected ARC/PLC payments in 2020, continued from page 2

Table 1. Projected ARC-CO payments per non-irrigated base acre in 2020

County	Projected ARC-CO payment in 2020		County	Projected ARC-CO payment in 2020		County	Projected ARC-CO payment in 2020	
	Corn	Soybeans		Corn	Soybeans		Corn	Soybeans
Adair	$0.00	$0.00	**Franklin**	**$0.00**	**$3.68**	Montgomery	$0.00	$0.00
Adams	$0.00	$0.00	Fremont	$0.00	$0.00	Muscatine	$0.00	$0.00
Allamakee	$0.00	$0.00	Greene	$0.00	$0.00	**O'Brien**	**$0.00**	**$31.55**
Appanoose	$0.00	$0.00	**Grundy**	**$0.00**	**$29.26**	**Osceola**	**$0.00**	**$25.84**
Audubon	$0.00	$0.00	Guthrie	$0.00	$0.00	Page	$0.00	$0.00
Benton	**$0.00**	**$7.83**	**Hamilton**	**$0.00**	**$10.60**	Palo Alto	$0.00	$0.00
Black Hawk	**$0.00**	**$6.53**	**Hancock**	**$0.00**	**$0.07**	**Plymouth**	**$0.00**	**$0.75**
Boone	**$0.00**	**$9.45**	**Hardin**	**$0.00**	**$11.47**	**Pocahontas**	**$0.00**	**$11.23**
Bremer	$0.00	$0.00	Harrison	$0.00	$0.00	**Polk**	**$0.00**	**$1.19**
Buchanan	$0.00	$0.00	**Henry**	**$13.19**	**$0.00**	Pottawattamie-East	$0.00	$0.00
Buena Vista	**$0.00**	**$21.79**	**Howard**	**$0.00**	**$0.51**	Pottawattamie-West	$0.00	$0.00
Butler	**$0.00**	**$9.32**	Humboldt	$0.00	$0.00	**Poweshiek**	**$0.00**	**$7.45**
Calhoun	**$0.00**	**$17.51**	Ida	$0.00	$0.00	Ringgold	$0.00	$0.00
Carroll	$0.00	$0.00	**Iowa**	**$0.00**	**$1.87**	Sac	$0.00	$0.00
Cass	$0.00	$0.00	**Jackson**	**$0.00**	**$5.66**	**Scott**	**$0.00**	**$11.30**
Cedar	$0.00	$0.00	Jasper	$0.00	$0.00	Shelby	$0.00	$0.00
Cerro Gordo	**$0.00**	**$17.06**	Jefferson	$0.00	$0.00	**Sioux**	**$0.00**	**$18.89**
Cherokee	**$0.00**	**$6.37**	Johnson	$0.00	$0.00	**Story**	**$0.00**	**$23.53**
Chickasaw	$0.00	$0.00	**Jones**	**$0.00**	**$7.02**	**Tama**	**$0.00**	**$20.35**
Clarke	$0.00	$0.00	Keokuk	$0.00	$0.00	**Taylor**	**$10.95**	**$0.00**
Clay	**$0.00**	**$40.34**	Kossuth	$0.00	$0.00	Union	$0.00	$0.00
Clayton	$0.00	$0.00	Lee	$0.00	$0.00	Van Buren	$0.00	$0.00
Clinton	**$2.00**	**$12.06**	Linn	$0.00	$0.00	Wapello	$0.00	$0.00
Crawford	$0.00	$0.00	**Louisa**	**$47.43**	**$11.45**	Warren	$0.00	$0.00
Dallas	$0.00	$0.00	Lucas	$0.00	$0.00	**Washington**	**$4.07**	**$0.00**
Davis	$0.00	$0.00	**Lyon**	**$2.75**	**$48.85**	Wayne	$0.00	$0.00
Decatur	$0.00	$0.00	Madison	$0.00	$0.00	**Webster**	**$0.00**	**$23.29**
Delaware	$0.00	$0.00	Mahaska	$0.00	$0.00	Winnebago	$0.00	$0.00
Des Moines	**$23.72**	**$10.16**	Marion	$0.00	$0.00	Winneshiek	$0.00	$0.00
Dickinson	**$0.00**	**$12.97**	**Marshall**	**$0.00**	**$6.56**	Woodbury	$0.00	$0.00
Dubuque	**$0.00**	**$11.37**	Mills	$0.00	$0.00	**Worth**	**$0.00**	**$21.25**
Emmet	**$0.00**	**$3.64**	**Mitchell**	**$0.00**	**$20.54**	Wright	$0.00	$0.00
Fayette	$0.00	$0.00	**Monona**	**$0.00**	**$2.03**			
Floyd	$0.00	$0.00	Monroe	$0.00	$0.00	**State Average**	**$1.04**	**$5.43**

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Projected ARC/PLC payments in 2020, continued from page 3

Table 2. Projected ARC-CO payments per irrigated base acre in 2020

County	Projected ARC-CO payment in 2020		County	Projected ARC-CO payment in 2020		County	Projected ARC-CO payment in 2020	
	Corn	Soybeans		Corn	Soybeans		Corn	Soybeans
Des Moines	**$16.20**	**$50.38**	Lee	$0.00	NA	Plymouth	$0.00	$0.00
Dickinson	**$19.46**	**NA**	**Louisa**	**$45.18**	**$15.65**	Pocahontas	$0.00	NA
Fayette	$0.00	NA	Lyon	$0.00	NA	Pottawattamie-East	$0.00	$0.00
Floyd	$0.00	NA	Mills	$0.00	$0.00	Pottawattamie-West	$0.00	$0.00
Fremont	$0.00	$0.00	Monona	$0.00	$0.00	Sioux	$0.00	$0.00
Hancock	**$0.00**	**$5.78**	**Muscatine**	**$0.00**	**$0.14**	**Story**	**NA**	**$11.46**
Harrison	$0.00	$0.00	**Osceola**	**$0.00**	**$3.40**	Woodbury	$0.00	$0.00
Kossuth	$0.00	NA	**Palo Alto**	**$0.00**	**$2.36**	Worth	$0.00	NA

Note: "NA" indicates that irrigated production of the commodity is not eligible for ARC-CO in a county.

PLC payments per base acre

PLC payments are triggered when the marketing-year average price is lower than the PLC reference price: $3.70 per bushel of corn, and $8.40 per bushel of soybeans. As of August, the projected marketing-year average corn and soybean prices are $3.60 and $8.55, respectively, and only the former is below its reference price. Based on average county PLC yields published by FSA, we project PLC payments in October 2020 for the 2019 marketing year will range from $7.80 to $13.80 per corn base acre, and average $12 across the 99 counties.

Total payments by county

In Iowa, 97% of the corn base acres and 98% of the soybean base acres were enrolled in ARC-CO over the 2014-2018 period. As of the date when this article is being written, no official statistics on the total number of acres enrolled in each program for 2019-2020 are publicly available. The following simulation provides a rough estimate of projected total payments by program and county for non-irrigated acres based on the following assumptions:

- Corn base acres in 2019-20: 90% in PLC, 7% in ARC-CO, 3% in ARC-IC
- Soybean base acres in 2019-20: 90% in ARC-CO, 7% in PLC, and 3% in ARC-IC

The simulated payments reported in Tables 3 and 4 exclude ARC-IC and irrigated base acres, due to insufficient data. Although enrollment in ARC-IC might be higher in counties bordering the Missouri or the Mississippi rivers than in the central corridor of the state, the same percentages were applied to all counties for simplicity of exposition.

Statewide ARC-CO payments on corn are projected at $790,040, with 82% of the payments going to Crop Reporting District (CRD) 9 in the southeast corner of the state and 9% going to CRD 7 in the southwest corner of the state.

Statewide ARC-CO payments on soybeans are projected at $42,676,191, with 49% of the payments going to CRD 1 (northwest), 28% going to CRD 5 (central), and 10% going to CRD 2 (north central).

While total ARC-CO payments are projected at $43,466,231, PLC payments for corn based acres are projected to accrue in all counties and total $168,088,804. The geographical shares of PLC payments are similar across the northern and central regions (between 11% and 15% of the state total), and much lower for the southern regions (averaging 6%).

These simulated payments highlight the regional disparities in ARC-CO, and the typically lower but more widespread payments triggered by PLC for corn base acres. The information needed to project ARC-CO payments in 2021 for 2020/21 crops is still not publicly available.

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Projected ARC/PLC payments in 2020, continued from page 4

Table 3. Simulated total payments by county in October 2020

County	ARC-CO payments		PLC payments		Total payments	County	ARC-CO payments		PLC payments		Total payments
	Corn	Soybeans	Corn	Soybeans			Corn	Soybeans	Corn	Soybeans	
Adair	$ -	$ -	$1,328,000	$ -	$1,328,000	Jefferson	$ -	$ -	$792,800	$ -	$792,800
Adams	$ -	$ -	$803,708	$ -	$803,708	Johnson	$ -	$ -	$1,472,695	$ -	$1,472,695
Allamakee	$ -	$ -	$1,069,563	$ -	$1,069,563	Jones	$ -	$242,214	$2,006,092	$ -	$2,248,306
Appanoose	$ -	$ -	$203,710	$ -	$203,710	Keokuk	$ -	$ -	$1,424,527	$ -	$1,424,527
Audubon	$ -	$ -	$1,446,023	$ -	$1,446,023	Kossuth	$ -	$ -	$3,944,264	$ -	$3,944,264
Benton	$ -	$839,426	$2,495,510	$ -	$3,334,936	Lee	$ -	$ -	$811,256	$ -	$811,256
Black Hawk	$ -	$384,784	$1,837,294	$ -	$2,222,078	Linn	$ -	$ -	$1,934,097	$ -	$1,934,097
Boone	$ -	$718,771	$1,913,047	$ -	$2,631,818	Louisa	$343,606	$388,522	$1,055,185	$ -	$1,787,314
Bremer	$ -	$ -	$1,600,649	$ -	$1,600,649	Lucas	$ -	$ -	$347,191	$ -	$347,191
Buchanan	$ -	$ -	$2,297,950	$ -	$2,297,950	Lyon	$36,238	$4,471,208	$2,268,059	$ -	$6,775,506
Buena Vista	$ -	$2,222,551	$2,150,349	$ -	$4,372,901	Madison	$ -	$ -	$851,518	$ -	$851,518
Butler	$ -	$581,889	$1,987,510	$ -	$2,569,398	Mahaska	$ -	$ -	$1,547,062	$ -	$1,547,062
Calhoun	$ -	$1,784,881	$2,106,840	$ -	$3,891,721	Marion	$ -	$ -	$883,502	$ -	$883,502
Carroll	$ -	$ -	$2,351,308	$ -	$2,351,308	Marshall	$ -	$435,851	$2,127,231	$ -	$2,563,081
Cass	$ -	$ -	$1,656,882	$ -	$1,656,882	Mills	$ -	$ -	$1,174,119	$ -	$1,174,119
Cedar	$ -	$ -	$2,413,863	$ -	$2,413,863	Mitchell	$ -	$1,172,435	$1,910,349	$ -	$3,082,785
Cerro Gordo	$ -	$1,052,003	$2,172,799	$ -	$3,224,802	Monona	$ -	$170,162	$2,145,263	$ -	$2,315,425
Cherokee	$ -	$583,267	$2,029,776	$ -	$2,613,044	Monroe	$ -	$ -	$351,963	$ -	$351,963
Chickasaw	$ -	$ -	$1,844,638	$ -	$1,844,638	Montgomery	$ -	$ -	$1,108,470	$ -	$1,108,470
Clarke	$ -	$ -	$475,873	$ -	$475,873	Muscatine	$ -	$ -	$1,178,919	$ -	$1,178,919
Clay	$ -	$3,742,667	$1,957,395	$ -	$5,700,062	O'Brien	$ -	$3,428,344	$2,189,761	$ -	$5,618,105
Clayton	$ -	$ -	$1,939,188	$ -	$1,939,188	Osceola	$ -	$2,082,149	$1,531,273	$ -	$3,613,422
Clinton	$34,438	$675,008	$2,817,528	$ -	$3,526,974	Page	$ -	$ -	$1,122,887	$ -	$1,122,887
Crawford	$ -	$ -	$2,662,156	$ -	$2,662,156	Palo Alto	$ -	$ -	$2,105,182	$ -	$2,105,182
Dallas	$ -	$ -	$1,572,439	$ -	$1,572,439	Plymouth	$ -	$97,019	$3,023,127	$ -	$3,120,147
Davis	$ -	$ -	$562,211	$ -	$562,211	Pocahontas	$ -	$1,264,883	$2,247,634	$ -	$3,512,517
Decatur	$ -	$ -	$277,979	$ -	$277,979	Polk	$ -	$52,339	$1,089,122	$ -	$1,141,461
Delaware	$ -	$ -	$2,349,038	$ -	$2,349,038	Pottawattamie-East	$ -	$ -	$1,546,604	$ -	$1,546,604
Des Moines	$151,514	$395,508	$917,487	$ -	$1,464,509	Pottawattamie-West	$ -	$ -	$1,415,694	$ -	$1,415,694
Dickinson	$ -	$761,815	$1,100,858	$ -	$1,862,674	Poweshiek	$ -	$495,825	$1,746,496	$ -	$2,242,320
Dubuque	$ -	$158,137	$1,703,325	$ -	$1,861,461	Ringgold	$ -	$ -	$675,384	$ -	$675,384
Emmet	$ -	$253,580	$1,518,437	$ -	$1,772,018	Sac	$ -	$ -	$2,191,297	$ -	$2,191,297
Fayette	$ -	$ -	$2,531,384	$ -	$2,531,384	Scott	$ -	$342,519	$1,646,119	$ -	$1,988,638
Floyd	$ -	$ -	$1,806,511	$ -	$1,806,511	Shelby	$ -	$ -	$2,408,243	$ -	$2,408,243
Franklin	$ -	$269,357	$2,342,240	$ -	$2,611,597	Sioux	$ -	$1,970,849	$3,407,505	$ -	$5,378,354
Fremont	$ -	$ -	$1,303,693	$ -	$1,303,693	Story	$ -	$1,918,908	$2,047,483	$ -	$3,966,391
Greene	$ -	$ -	$2,045,987	$ -	$2,045,987	Tama	$ -	$1,621,267	$2,355,309	$ -	$3,976,576
Grundy	$ -	$2,454,269	$2,383,609	$ -	$4,837,878	Taylor	$72,497	$ -	$755,556	$ -	$828,053
Guthrie	$ -	$ -	$1,405,051	$ -	$1,405,051	Union	$ -	$ -	$287,369	$ -	$287,369
Hamilton	$ -	$833,365	$2,253,683	$ -	$3,087,049	Van Buren	$ -	$ -	$483,012	$ -	$483,012
Hancock	$ -	$5,374	$2,270,398	$ -	$2,275,771	Wapello	$ -	$ -	$638,058	$ -	$638,058
Hardin	$ -	$774,413	$2,365,531	$ -	$3,139,944	Warren	$ -	$ -	$755,570	$ -	$755,570
Harrison	$ -	$ -	$2,100,422	$ -	$2,100,422	Washington	$45,920	$ -	$1,641,322	$ -	$1,687,242
Henry	$105,828	$ -	$1,111,085	$ -	$1,216,913	Wayne	$ -	$ -	$711,426	$ -	$711,426
Howard	$ -	$27,024	$1,583,815	$ -	$1,610,839	Webster	$ -	$2,673,229	$2,451,645	$ -	$5,124,874
Humboldt	$ -	$ -	$1,650,138	$ -	$1,650,138	Winnebago	$ -	$ -	$1,732,892	$ -	$1,732,892
Ida	$ -	$ -	$1,760,965	$ -	$1,760,965	Winneshiek	$ -	$ -	$1,997,254	$ -	$1,997,254
Iowa	$ -	$75,565	$1,769,645	$ -	$1,845,210	Woodbury	$ -	$ -	$3,026,829	$ -	$3,026,829
Jackson	$ -	$91,098	$1,419,506	$ -	$1,510,605	Worth	$ -	$1,163,713	$1,479,725	$ -	$2,643,438
Jasper	$ -	$ -	$2,203,488	$ -	$2,203,488	Wright	$ -	$ -	$2,173,986	$ -	$2,173,986

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Projected ARC/PLC payments in 2020, continued from page 5

Table 4. Simulated total payments by crop reporting district and state in October 2020

Crop reporting district	ARC-CO payments		PLC payments		Total payments
	Corn	Soybeans	Corn	Soybeans	
Northwest (CRD 1)	$36,238	$20,878,334	$25,529,357	$ -	$46,443,929
North Central (CRD 2)	$ -	$4,244,771	$23,470,810	$ -	$27,715,582
Northeast (CRD 3)	$ -	$569,945	$20,754,098	$ -	$21,324,043
West Central (CRD 4)	$ -	$1,955,043	$25,650,383	$ -	$27,605,426
Central (CRD 5)	$ -	$11,978,238	$24,509,081	$ -	$36,487,319
East Central (CRD 6)	$34,438	$2,265,830	$19,153,974	$ -	$21,454,242
Southwest (CRD 7)	$72,497	$ -	$12,215,611	$ -	$12,288,107
South Central (CRD 8)	$ -	$ -	$5,821,484	$ -	$5,821,484
Southeast (CRD 9)	$646,868	$784,030	$10,984,005	$ -	$12,414,903
State total	**$790,040**	**$42,676,191**	**$168,088,804**	**$ -**	**$211,555,035**

Online tools

Iowa State University Extension and Outreach maintains a suite of Farm Bill Tools in the Ag Decision Maker website, www.extension.iastate.edu/agdm/info/farmbill.html. You can calculate your expected ARC-CO and PLC payments for irrigated and non-irrigated acres using Decision Tool File A1-33, https://bit.ly/2OnuE5X, or see a map of payments across counties, commodities, and years, using the online visual tool ARC/PLC Payments per Base Acre in Iowa, https://bit.ly/32eHmMw.

Between a rock and a hard place

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

The old line in crop marketing is "the quickest way to higher prices is for somebody to have a short crop, preferably someone besides us." This year, the markets seem set to prove that line wrong. Drought conditions have cropped up in several places across the country, but the potential damage from drought has not been enough to spur a weather rally in the crop markets. Many farmers in Iowa are watching their crops under weather stress without the usual benefit of the usually accompanying price boost. The calendar year of 2020 continues to be filled with unique challenges.

Over the past few weeks, drought has covered over half of the state of Iowa. Currently, nearly 63% of the state is classified as under drought, with nearly 13% of the state in severe drought. This drought has been building at just the wrong time for Iowa's corn and soybean crops. The heat and dryness impacted the corn crop during pollination, potentially limiting the number of rows and kernels per ear. Drought stress in soybean can limit growth and hasten early flowering and seed set, reducing yield. But while the drought conditions have spread throughout the state, crop prices have changed very little due to weather. The drought is not large nor severe enough (so far) to force prices higher.

One of the major reasons why, is that while drought conditions have worsened crop ratings have not. Figure 2 shows the weekly summary of the national corn crop conditions from USDA's Crop Progress reports. Despite the hotter, drier weather, experts still view over 70% of the nation's corn crop in good to excellent shape. In fact, even as Iowa's drought conditions grew last week, the national corn rating grew as well. Iowa's corn rating did decline, but 77% of the corn crop is still rated good to excellent. Thus, the drought's impact is not showing up in crop ratings, and therefore, is not affecting prices.

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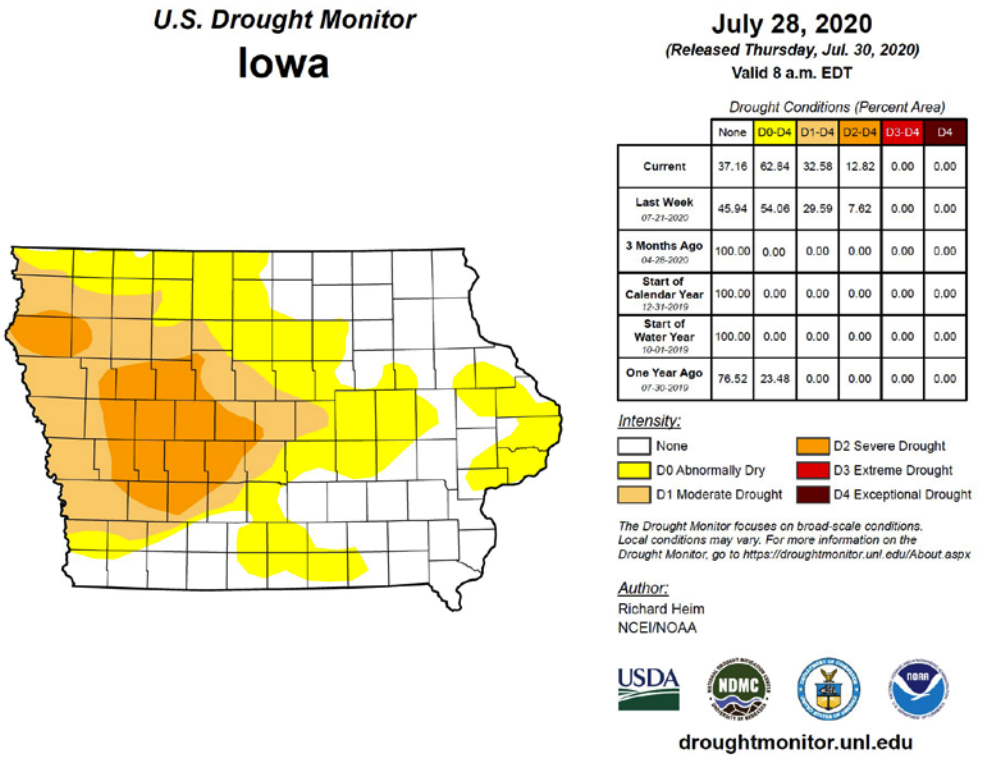
Figure 1. Iowa's drought monitor *(Sources: NOAA and UNL)*



A similar story can be seen for soybeans. National soybean crop ratings show 72% of the crop is rated good to excellent. The 5-year average rating for this time of year is just over 63%. So the drought has yet to impact soybean ratings. In Iowa, over three-quarters of the soybeans are classified as good to excellent. It's a strange combination: half of the state is in drought, but over 75% of Iowa's corn and soybeans look good from the road. Right now, traders are holding to the crop ratings to set pricing.

A weather rally may still be in the offing, but the markets want proof of crop damage before allowing that to happen. The issue for farmers is that it may be September before we see that proof. Typically, August is the first month when USDA sends enumerators out in the fields for the objective yield survey, where they tally plant populations and ear and pod counts. But due to budget cuts over the past couple of years, USDA has moved the schedule back so that September is now the first month of the survey. The delay in the survey translates into a delay in critical data used to inform national yield estimates. And in extreme weather years, the objective yield data is even more important. And this year, that data may be as important as it ever was. Farmers, traders, and market analysts are all trying to compute whether the generally good planting season and ample soil moisture to start the growing season were enough to hold off some of the adverse effects of the drought. The crop ratings at this point suggest that they were. But the objective yield survey would provide a much clearer picture. And as it stands, the survey data is still a month and a half away.

So even though we have potential supply issues, the markets seem unmoved by them. In fact, the corn market has not only shrugged off the drought so far, but also the increase in advance export sales throughout July. While USDA's 2020/21 season-average price estimate for corn sits at $3.35 per bushel, futures have drifted down to the point where they indicate a season-average prices in the $3.20 per bushel range. Soybeans have fared a bit better. The increases in Chinese purchases over the past couple of months for both the 2019 and 2020 soybean crops have provided support for soybean prices. And traders are holding soybeans in better regard than USDA's price estimate. Currently, USDA projects the 2020/21 season-average price at $8.50 per bushel,

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while the futures market points to bean prices in the $8.70 per bushel range.

The script for the crops has flipped from the beginning of the year. When we started 2020, crop futures favored corn over soybean. For the first two months of the year, futures outlined season-average prices above breakeven for both crops, but corn had the lead. COVID-19 sent both markets down below breakeven, but corn held on to a relative pricing advantage. That advantage has disappeared in July. So now, while corn prices are still drifting below breakeven, soybean prices have edged ever so slightly back above breakeven. August is traditionally a slow month for crop sales. While the drought may eventually lead to higher prices, that potential bump would be a lot closer to harvest than usual. And it would likely need some help from the demand side to create a large enough price swing to get farmers excited. Crop storage will be critical this harvest, and the impact from the August 10 derecho is not yet fully realized.

Figure 2. National corn conditions *(Source: USDA-NASS)*

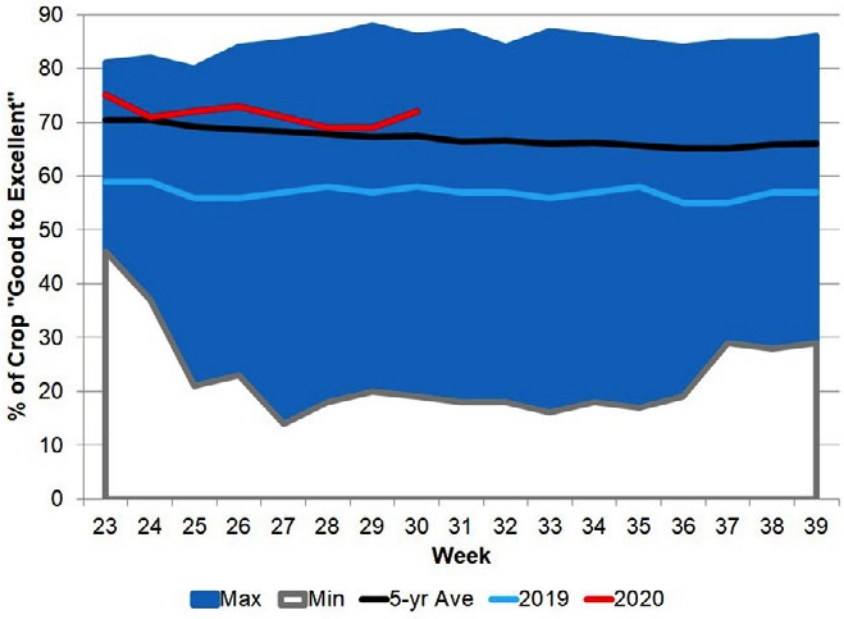
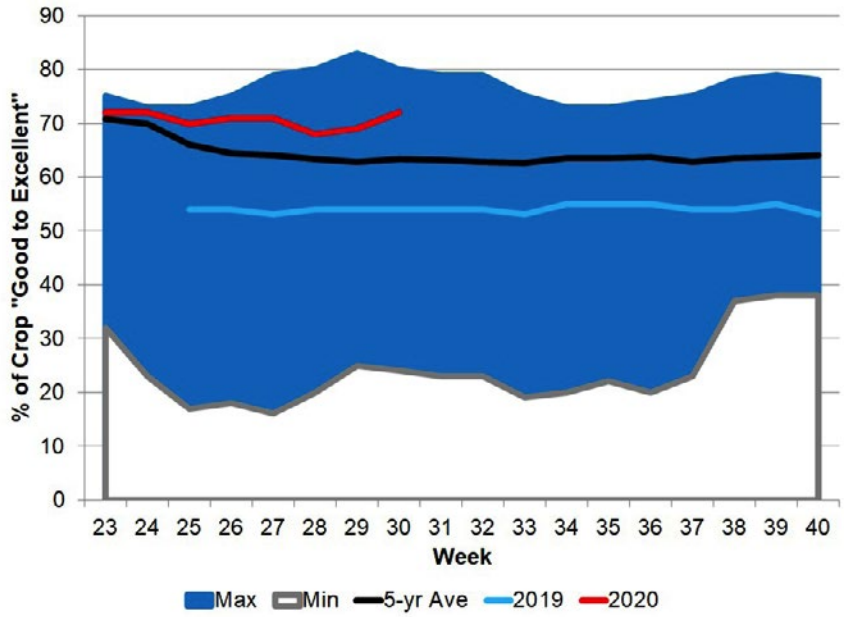


Figure 3. National soybean conditions *(Source: USDA-NASS)*



Little change in mid-year cattle inventory

By Lee Schulz, extension livestock economist, 515-294-3356, lschulz@iastate.edu

Almost all July 1, 2020 inventory estimates in USDA's biannual Cattle report were within one percentage point of July 1, 2019 levels. Several factors complicate interpreting the numbers. The list includes large slaughter disruptions in April and May, the prevailing backlog of fed cattle, changes in timing and weight of feedlot placements, drought in some areas, and a less stable economic outlook.

From producer surveys, USDA estimated the July 1, 2020 US all cattle and calves inventory at 103.0 million head, up 0.1% or 100,000 head from 2019 and the largest July 1 herd since 2008 (Table 1). Beef cow numbers shrunk by 0.8% or 250,000 head from July 1, 2019 to 32.05 million head. USDA projects the 2020 calf crop at 35.8 million head, down 0.7%, or 259,600 head from 2019.

The July 1 beef cowherd is generally larger than the January 1 inventory. Historically, this year's 2.3% rise would suggest expansion. Beef cow slaughter less so. Through 2020's first 30 weeks, beef cow slaughter averaged 4% ahead of 2019. Before slaughter plant disruptions, weekly harvest was running up 10%, well ahead of 2019. Beef cow slaughter plunged for the seven weeks from April to mid-May. Year-over-year cuts ran 2% to 20%, averaging down 13%. Since then, through the week ending July 25, beef cow slaughter has been up 6% from 2019. Four of those weeks saw double digit hikes. June and July figures this much higher are significant, given it took until the end of July for steer and heifer slaughter to get back to 2019 levels.

More replacement heifers entering herds?

Based on the number of beef cows as of July 1, USDA's Economic Research Service estimates 2.663 million beef replacement heifers entered the herd in January through June. That's 7.6% more than last year. Beef heifers entering the herd in the first half of 2020 as a percent of the heifers intended for beef replacements on January 1, 2020 were 46.1%, the highest level since 2011.

Surveys for the mid-year Cattle report suggest producers intend to keep 4.4 million beef heifers as beef cow replacements, the same as in July 2019. This neutral position would indicate producers are replacing culled cows through normal turnover. Fourth quarter calf prices will likely be a hinge-point and will have a big impact on the January 1, 2021 inventory, but that largely means cow-calf producers will need to "hang-on" to see that reality. Abnormally dry and drought conditions persist in some key beef cow regions. The longevity of these weather issues may ultimately dictate carrying capacity of breeding herds.

One inventory estimate that was more than up slightly from 2019 was other heifers, or heifers that will not be bred for beef or dairy replacements. Other heifers, at 8.0 million head, were 1.3% above a year earlier. USDA's National Agricultural Statistics Cattle on Feed report estimated 7.033 million steers and 4.405 million heifers were on feed in 1,000+ capacity feedlots on July 1, 2020. Compared to July 1, 2019, the number of heifers on feed fell 1.5%, while steers rose 0.3%. Heifers represented 38.5% of the number of cattle on feed on July 1, compared to 38.9% last year. These data are a bit misleading though as we would expect heifer feedlot inventories to fall below a year ago after 2019's large numbers of heifers on feed.

COVID-19 delays feedlot placements

The USDA Economic Research Service webpage Livestock & Meat Domestic Data has a table titled "Feeder Cattle Supplies Outside Feedlots." On April 1, 2020 producers had 20.539 million head available to place into feedlots, 3.3% larger than April 1, 2019. This was the highest April number in more than 10 years. Feeder cattle supplies outside feedlots hint at feedlot placements in subsequent months. In this case, it reflects the slowdown in feeder cattle sales.

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Table 1. US Cattle Inventory by Class and Calf Crop

July 1 inventory [1/]	2019	2020	2020 as % of 2019
Cattle and calves	102,900.0	103,000.0	100.1
Cows and heifers that calved	41,600.0	41,400.0	99.5
Beef cows	32,300.0	32,050.0	99.2
Milk cows	9,300.0	9,350.0	100.5
Heifers 500 pounds and over	16,400.0	16,500.0	100.6
For beef cow replacement	4,400.0	4,400.0	100.0
For milk cow replacement	4,100.0	4,100.0	100.0
Other heifers	7,900.0	8,000.0	101.3
Steers 500 pounds and over	14,700.0	15,000.0	102.0
Bulls 500 pounds and over	2,100.0	2,100.0	100.0
Calves under 500 pounds	28,100.0	28,000.0	99.6
Feeder cattle outside feedlots	37,100.0	37,400.0	100.8
Cattle on feed	13,600.0	13,600.0	100.0
Calf crop [2/]	36,059.6	35,800.0	99.3

[1/] 1,000 head,
[2/] First half of 2020 estimate plus second half of 2020 expectations.
Data Source: USDA-NASS
Full report: https://downloads.usda.library.cornell.edu/usda-esmis/files/h702q636h/bg2582442/fn107k88q/catl0720.pdf

During March 2020, USDA's Weekly National Feeder & Stocker Cattle Summary reports, which include auctions, direct, and video/internet sales, recorded 590,600 fewer head sold than in March 2019. April 2020 had 448,900 fewer head sold. An obvious outcome of some auction barns being closed and producers trying to ride out the softer market.

Those feeder cattle didn't disappear, they just stayed on farms longer. June 2020 placements were 2.1% higher than June 2019 and were dominated by heavy and light weight feeders. Placements of feeder cattle 800 to 1,000 pounds were up 5.7% year over year with placements 700 to 799 pounds down 7.9%. Meanwhile, placement of feeders under 700 pounds were up 8.8% year over year. Dry conditions, low corn prices, and better cattle prices have conspired to move feeders through the system. The 37.4 million head of cattle available to place into feedlots on July 1 were 0.8% larger than last year. This suggests a backlog still exists, but the market is becoming more current.

Cattle and calves on feed in all US feedlots totaled 13.6 million head on July 1, 2020, unchanged from 2019. Feedlots with capacity of 1,000 or more had 84.1% or 11.438 million of the total, down slightly from July 1, 2019. Cattle on feed in US feedlots with less than 1,000 head capacity at 2.162 million head were up 2.0% compared to a year ago.

Feedlot backup persists

On July 1, 2020, feedlots with capacity of 1,000 or more head held 1.299 million cattle that had been on feed for over 180 days. This is up 930,000 head or 252% from July 2019. Cattle on feed over 180 days did drop from June 1 to July 1 by 208,000 head indicating the backlog is shrinking. Still, a lot of cattle remain to be cleaned up to get feedlots current.

After the market works through those burdensome supplies, lower second quarter placements in response to dismal economic returns should provide relief. Nationally, cattle on feed 150 to 180 days were at par with 2019, while the inventory on feed 120 to

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150 days was down 7%. Placing heavier weight cattle in coming months will add to these pipeline supplies.

On July 1, 2020 Iowa feedlots with greater than 1,000 head capacity had 220,000 cattle that had been on feed over 180 days, up 118,000 head or 116% from a year ago. Iowa feedlots with less than 1,000 head capacity had 9,000 head or 4% more cattle on feed for more than 180 days.

In Iowa, small Iowa feedlots are the main contributor to larger year-over-year inventories of the next supply of market ready cattle. July 1 inventories on hand for cattle on feed for 120 to 180 days in 1 to 999 head capacity feedlots were up 46,000 head or 46% from a year ago.

Nationally, USDA estimated July 1 cattle on feed for less than 120 days at 6.58 million head in 1,000+ capacity feedlots, down 11% from 2019. Iowa inventories, at 196,000 head in large feedlots and 119,000 head in small feedlots were down 37% and 44% from a year ago, respectively.

In most years, cattle entering feedlots start ramping up in August. Placements typically peak in October. Conditions for feedlots could soon get some relief as breakeven projections are lower than live cattle futures market prices in late 2020 and early 2021. This could help spur feedlot placements.

Updates, continued from page 1

Internet Updates

The following Information Files, Decision Tool, and Videos have been updated on www.extension.iastate.edu/agdm.

2018 Farm Bill Payment Estimator by County for ARC-CO and PLC – A1-33 (Decision Tool)

Drought Damage Can Affect Crop Insurance Yields – A1-59 (2 pages)

Whole Farm Revenue Protection Crop Insurance – A1-60 (3 pages)

Farmland Leasing and Management: Landowner-Producer Communication and Agreements – C2-01 (3 part video series)
Part 1 | Resources, Survey, Communication - https://vimeo.com/444912462
Part 2 | Legal issues, Written leases, Lease termination, Conservation, Managing Stress - https://vimeo.com/444946300
Part 3 | How to use the cash rent survey, Methods to set cash rents, Flexible cash rent - https://vimeo.com/445041014

Farmland Leasing Overview – C2-20 (Video, https://vimeo.com/438688120)

Current Profitability

The following tools have been updated on www.extension.iastate.edu/agdm/info/outlook.html.

Corn Profitability – A1-85

Soybean Profitability – A1-86

Iowa Cash Corn and Soybean Prices – A2-11

Season Average Price Calculator – A2-15

Ethanol Profitability – D1-10

Biodiesel Profitability – D1-15