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College of Agriculture, Food and Environment
Cooperative Extension Service

Wheat Science

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What's inside

University of Kentucky
College of Agriculture, Food and Environment
Grain and Forage Center of Excellence

2019 and 2020 Wheat Crop Outlook and Thinking about the 2018 Farm Bill ARC vs. PLC Decision

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You have likely heard from your county FSA office about the 2018 Farm Bill decisions that will have to be made by March 15, 2020. Landowners will have a one-time opportunity to update the yields used in calculating the Price Loss Coverage (PLC) payments. I encourage all landowners to update these yields regardless of the farm program elected because the program yields might be used in future farm bills.

The 2018 Farm Bill is providing flexibility for farmers to change the program election throughout the life of the legislation. Farmers will elect PLC or ARC for the 2019 and 2020 crops for each FSA farm and each type of base acreage. This decision then becomes an annual election for the 2021, 2022, and 2023 crops. This column is focusing on the decision to elect PLC or the Agriculture Risk Coverage (ARC) for wheat for the 2019 and 2020 crops.

The first step in making this farm bill decision is to develop a price expectation for the 2019 and 2020 wheat crops. Both PLC and ARC use the U.S. marketing year average (MYA) price to establish the payment rate for each crop year.

Table 1 reports the supply and demand for wheat for the 2018, 2019, and 2020 crops. USDA projects the 2019 crop at 1.9 billion bushels based on a harvested area of 37.2 million acres with an average yield of 51.7 bushels/acre (Table 1). The total wheat supply of 3.1 billion bushels is marginally larger than the supply for the 2018 marketing year.

Table 1. U.S. Wheat Supply and Use for the 2018, 2019 (F), and 2020 (F) Wheat Crops with Sensitivity Analysis.

	Nov WASDE	Nov WASDE	2020-21 (F) Preliminary Baseline Tables		
	2018-19	2019-20 (F)	Baseline	3-Yr Avg. Yield	2019 Yield
Planted (million)	47.8	45.2	45.0		
Harvested (million)	39.6	37.2	38.1		
Yield (bu/acre)	47.6	51.7	48.2	49.0	51.7
---------- Million Bushels ----------					
Beginning Stocks	1,099	1,080	1,014		
Production	1,885	1,920	1,836	1,867	1,970
Imports	135	120	140		
Total Supply	3,119	3,120	2,990	3,021	3,124
Food	955	955	963	958	
Seed	59	61	61		
Feed and Residual	90	140	120		
Exports	936	950	925		
Total Use	2,039	2,106	2,069	2,064	2,064
Ending Stocks	1,080	1,014	921	957	1,060
Stocks-to-Use	52.9%	48.1%	44.5%	46.3%	51.3%
Days Stocks	193	176	162	169	187
U.S. MYA Price	$5.16	$4.60	$4.80	$4.60 - $4.70	$4.50 - $4.60

Source: USDA: November 2019 WASDE and 2019 Preliminary Baseline Projections.

Total use is also projected to increase from the 2018 marketing year due to increased feed demand and exports. Both demand estimates are likely to be reduced in future USDA reports, which would increase ending stocks and push the U.S. MYA price lower.

Regardless, USDA is projecting 2019-20 ending stocks at 1.01 billion bushels. The U.S. MYA price is projected at $4.60/ bushel.

USDA projects the 2020 wheat crop at 1.8 billion bushels by assuming harvested area at 38.1 million acres and a trend yield of 48.2 bushels/acre (Table 1). The slightly smaller wheat crop combined with a smaller carry-in would reduce the 2020 wheat supply below 3 billion bushels.

USDA is conservative for 2020 wheat demand except for food use. The 8 million bushels year-over-year increase is unusually large and likely overstates food demand. The other components of demand seem appropriate.

USDA projects wheat stocks to decline to 921 million bushels, which would support a U.S. MYA price of $4.80/ bushel.

Table 1 also provides sensitivity analysis if wheat yields are at the 3-year average or the 2019 yield of 49 and 51.7 bushels/acre, respectively. The sensitivity analysis also reduced food demand to a more reasonable level of 958 million bushels. The increased production and reduced demand would increase stocks to 957 and 1.06 billion bushels, respectively (Table 1). The increased stocks would support a 2020 U.S. MYA price in the range of $4.50 - $4.70 per bushel.

What does this mean for the farm bill election decision? Recall that PLC will trigger a payment whenever the U.S. MYA price is below the effective target price of $5.50/bushel. Also, recall that the ARC program triggers a payment based on the county revenue relative to the historic wheat revenue. A lower U.S. MYA price will increase the likelihood of triggering an ARC payment as long as county wheat yields do not exceed the historic county yield.

The average ARC and PLC wheat payments for Caldwell and Christian counties from the 2014 Farm Bill are reported in Table 2. The total PLC payments were larger than ARC payments for both counties. The average PLC yields, based on NASS data, are used to calculate PLC and are assumed to be 60 and 65 bushels/acre for Caldwell and Christian Counties, respectively. If your farm's PLC yields were larger than the average NASS yields, then PLC payments would be larger than those reported in Table 2.

Table 2. Average Wheat ARC-County and PLC Payments for Caldwell and Christian County for the 2014 Farm Bill ($/base acre)				
	Avg. Caldwell County ($/base acre)		Avg. Christian County ($/base acre)	
Crop Year	ARC-CO	PLC	ARC-CP	PLC
2014	$0.00	$0.00	$0.00	$0.00
2015	$29.17	$31.11	$43.85	$33.70
2016	$42.71	$82.11	$44.99	$88.95
2017	$15.95	$39.78	$41.62	$43.10
2018	$38.97	$17.34	$23.98	$18.79
Total	$126.81	$170.34	$154.44	$184.54

Source: USDA-Farm Service Agency. PLC Yields of 60 and 65 bushels/acre assumed for Caldwell and Christian County, respectively.

The takeaway message is that both programs triggered large payments for the 2014 Farm Bill, with PLC significantly better for the 2016 crop year. The ARC price support for wheat is currently lower than in 2014 to 2016, so ARC may not be as beneficial of a program under the 2018 Farm Bill.

The FarmDoc team at the University of Illinois have developed a payment calculator to help guide the ARC vs. PLC decision for 2019 and 2020. This calculator provides four different price forecasts so managers can evaluate payments based on various prices (high, low, and two estimates in-between).

Table 3 provides the average projected ARC and PLC payments ($/base acre) for the 2019 and 2020 crops with the range in parenthesis. PLC is projected to have a larger expected payment than ARC for both counties. Managers should notice that the expected payments are lower than those payments received under the 2014 Farm Bill.

Table 3. Projected ARC-CO and PLC Wheat Payments for 2019-2020 for Christian and Caldwell Counties ($/Base Acre)				
	Avg. Caldwell County ($/base acre)		Avg. Christian County ($/base acre)	
Crop Year	ARC-CO	PLC	ARC-CO	PLC
2019 (F)	$20.37	$29.35	$13.03	$31.79
	$15.32—$25.42)	$18.53—$40.16)	($8.42—$17.64)	$20.07—$43.51)
2020 (F)	$15.27	$29.45	$10.53	$31.90
	($10.86—$19.68)	($18.57—$40.33)	$6.15—$14.90)	($20.11—$43.69)

Source: FarmDoc Gardner Payment Calculator. https://fd-tools.ncsa.illinois.edu/#/dashboard
PLC Yields are assumed at 60 and 65 bushels/acre for Caldwell and Christian Counties, respectively.

I encourage managers to use the FarmDoc calculator for their farm's yield data to make an informed decision by March 15, 2020.

COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT
Grain and Forage Center of Excellence

University of Kentucky

January 7, 2020

Winter Wheat Meeting

Siemer Milling Co. Conference Center
UKREC, Princeton KY 42445

TOPICS

Guest speaker: Siemer Milling Company

SOIL FERTILITY MANAGEMENT FOR WINTER WHEAT PRODUCTION ◆ CROP CONDITION ◆ CAN MANAGEMENT PRACTICES (OTHER THAN FUNGICIDE) REDUCE DON? ◆ RESULTS OF FUNGICIDE TRIALS FOCUSING ON MANAGEMENT OF FUSARIUM HEAD BLIGHT ◆ THE 2019 SOUTHEASTERN GRAIN GATHERING ◆ SMALL GRAINS AS RESERVOIR OF NATURAL ENEMIES MAY HELP TO REDUCE PESTS IN SUMMER GROWN FIELD CROPS IN WESTERN KENTUCKY ◆ SPECIALIZED TRIALS IN UK WHEAT VARIETY TESTING ◆ RYE ON THE FARMS ◆ WEED CONTROL IN WHEAT ◆ THE ECONOMICS OF SPECIALTY SMALL GRAIN IN KY

REGISTRATION: 8:30 am (CT)
TIME: 9 am—3 pm (CT)
GPS: 348 University Dr.
Princeton, KY 42445

Lunch sponsor by: Kentucky Small Grain Growers' Association

APPROVED CREDITS:
PAT: 3 General,1 Specific (Cat 1A, 4 ,10, & 12)
CCA: 0.5 NM, 1 PM, 1.5 CM

For additional information contact: Colette Laurent, claurent@uky.edu – (270) 365-7541 EXT 21321

USEFUL RESOURCES

College of Agriculture, Food and Environment

WHEAT SCIENCE GROUP

http://wheatscience.ca.uky.edu/home

KyGRAINS.info

Kentucky Pest News

Entomology · Plant Pathology · Weed Science

http://kentuckypestnews.wordpress.com/

Crops Marketing and Management Update

http://www.uky.edu/Ag/AgEcon/extcmmu.php

KATS

Kentucky Agriculture Training School

Carrie Knott, Extension Grain Crops Specialist

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RETURN SERVICE REQUESTED

Upcoming Events

January 7	***UK Winter Wheat Meeting***
January 16	**KY Commodity Conference (Bowling Green)**
February 18	**KATS—Weeds and Soil Considerations**
March 5	**KATS—Green Up**
March 12	**IPM Meeting**
March 26	**KATS—Drones and Planters**
May 12	***UK Wheat Field Day***
May 28	**KATS—Crop Scouting Clinic**
June 18	**KATS—Mid-Season**
July 16	**KATS—Spray Clinic**
July 28	***UK Corn, Soybean & Tobacco Field Day***
August 27	**KATS—End of Season**