PRICE AND REVENUE PROTECTION IN THE 2014 FARM BILL: UPDATE FOR WYOMING

NICOLE S. BALLENGER, PROFESSOR, DEPARTMENT OF AGRICULTURAL AND APPLIED ECONOMICS UNIVERSITY OF WYOMING

UW UNIVERSITY OF WYOMING

B-1274
November 2015

Return to UW Extension publications site.

PRICE AND REVENUE PROTECTION IN THE 2014 FARM BILL: UPDATE FOR WYOMING

By Nicole S. Ballenger, professor, Department of Agricultural and Applied Economics, University of Wyoming

Editor: Steven L. Miller, senior editor, College of Agriculture and Natural Resources, Office of Communications and Technology.
Graphic Designer: Tanya Engel, College of Agriculture and Natural Resources, Office of Communications and Technology.

Issued in furtherance of extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Glen Whipple, director, University of Wyoming Extension, University of Wyoming, Laramie, Wyoming 82071.

PRICE AND REVENUE PROTECTION IN THE 2014 FARM BILL: UPDATE FOR WYOMING

The 2014 Farm Bill created a suite of new programs designed to protect farm prices and revenue. These programs replaced the direct and counter-cyclical payment programs created by earlier farm legislation[1]. The new programs include:

- The Price Loss Coverage (PLC) program,
- The Agriculture Risk Coverage – County (ARC-CO) program, and
- The Agriculture Risk Coverage – Individual (ARC-IC) program.

During 2015, eligible landowners and producers — those owning or operating farms with *base acreage*[2] — had the option of choosing from the above list the program (or programs) they believed afforded the best protection against price or revenue declines. They could choose either PLC or ARC-CO for each eligible commodity in their farm's base, or they could choose ARC-IC for the entire farm. They had to make their program elections by April 7, 2015, and then enroll in the elected programs by September 30, 2015. Election decisions were for the life of the current farm bill, through 2018. Eligible producers who missed the program election deadline could still enroll, but only in the PLC program for 2015-2018 (the default program).

HOW DO THESE PROGRAMS WORK?

The PLC program provides price protection for eligible commodities (see Table 1) but does not cover declines in production that may affect farm revenue. The *price guarantee* is based on *reference prices* set in the farm bill, for each covered commodity, for the duration of the farm bill. Commodity payments are issued when the commodity's so-called *effective price* falls below its reference price. The effective price is the higher of the 12-month market-year average price[3] or the *national loan rate*.[4] Loan rates are essentially price floors that are also set in the farm bill for the duration of the farm bill. These prices are shown in Table 2.

The ARC-CO program provides revenue protection for these same eligible commodities. The revenue guarantee is based on the *county-level yield history*. Payments are issued when the actual crop revenue at the county level (the actual county yield

---

[1] For a description of direct and counter-cyclical payments and other farm support programs created by previous farm bills, see *The U.S. Farm Bill: Overview, and Program Participation and Importance in Wyoming*, University of Wyoming Extension Bulletin B-1261, February 2015, available on-line at: http://www.wyoextension.org/publications/Search_Details.php?pubid=1874.

[2] Base acreage is a farm's crop-specific acreage of wheat, feed grains, upland cotton, rice, oilseeds, pulse crops, or peanuts eligible to participate in commodity programs. Each farm bill determines rules for base acreage based on past commodity program participation.

[3] The 2014-2015 national average market price is the price published by NASS for 2014.

[4] The loan rate program and how it supports farm prices is also explained in *The U.S. Farm Bill: Overview, and Program Participation and Importance in Wyoming*, University of Wyoming Extension Bulletin B-1261, February 2015, available on-line at: http://www.wyoextension.org/publications/Search_Details.php?pubid=1874.

Table 1: Commodities eligible for ARC/PLC program payments under the 2014 Farm Bill

Wheat	Oats	Barley
Corn	Grain sorghum	Rice
Soybeans	Sunflower seed	Rapeseed
Canola	Safflower	Flaxseed
Mustard seed	Crambe	Sesame seed
Dry peas	Lentils	Small chickpeas
Large chickpeas	Peanuts	

times the *effective price*) falls below the ARC county revenue guarantee (86% x the 5-year Olympic average national farm price x the 5-year Olympic average county yield[5]).

Neither the PLC nor ARC-CO program requires producers to plant any of the eligible commodities during the enrollment period. Rather, the commodities elected for coverage by these programs must be in the farm's *base acres allocation*. (USDA's Farm Services Agency [FSA] retains records on each farm's base acres and the allocation of those acres among eligible commodities. Program participants had a one-time opportunity to update their base acre allocations, but they could not expand the total base.) For example, a farm with a corn base may receive PLC or ARC-CO payments for corn—whenever corn payments are made—even if the farm has not produced corn during the market year for which payments are made.

In addition, program elections for PLC and ARC-CO can be made on a commodity-by-commodity basis, for each commodity in the farm's base. For example, a farmer may enroll his farm's corn base acres in the PLC program and his farm's wheat base acres in the ARC-CO program on the same farm.

In contrast, the ARC-IC program provides whole farm-level revenue protection for all eligible commodities *actually* planted on the farm during the market year. The revenue guarantee is based on the farm's own yield history. A farmer who enrolls his or her farm in the ARC-IC program may not also participate in the PLC and ARC-CO programs.

WILL PLC OR ARC PAYMENTS BE ISSUED FOR THE 2014-2015 MARKET YEAR?

National average prices for the 2014-2015 market year are final for several covered commodities produced in Wyoming, including barley, corn, dry peas, grain sorghum, oats, soybeans, and wheat. For other eligible commodities of interest to some state producers, including canola, flax, safflower, and sunflower, the market-year average price will not be final until November 30.

Based on the reference prices and projected market-year prices shown in Table 2, PLC payments for the 2014-2015 market year are unlikely for most eligible crops. A likely exception is payments for canola, because its projected market year price is $3.15 per cwt ($20.15-$17.00 = $3.15) below its reference price. The lack of PLC payments for other crops means that on average over the marketing year commodity prices were relatively strong. Since program elections carry through 2018, producers who continue to enroll annually may still benefit from payments in the upcoming marketing years should commodity prices soften.

Additionally, throughout the country many producers who enrolled their base acres in the PLC program had the option of also purchasing a Supplemental Coverage Option (SCO) plan to boost the yield or revenue protection afforded by

[5] An Olympic average is calculated by eliminating the high and low observations and then averaging all remaining observations.

an underlying crop insurance policy. SCO covers a portion of the underlying crop insurance policy deductible, and the federal government pays 65 percent of the premium cost.

The SCO program is available for barley in several northern and western Wyoming counties; for corn in several northwestern and southeastern counties; and for wheat in just two southeastern Wyoming counties (Risk Management Agency, SCO maps, available on-line at: http://www.rma.usda.gov/news/currentissues/farmbill/2015scomap.pdf).

Payments to producers of commodities enrolled in the ARC-CO and ARC-IC programs are more difficult to determine at this time because of more extensive data needs. ARC payments will depend on current yields and prices in relation to historical yields and prices; ARC-CO program yields may vary significantly by county across the country, and ARC-IC program yields may vary across individual farms even within a county.

However, a recent analysis by Gary Schnitkey and Carl Zulauf at University of Illinois finds that ARC-CO payments are likely to be issued for quite a number of eligible commodities, including (in order of size of anticipated payment per base acre) corn, large chickpeas, lentils, grain sorghum, sunflower, dry peas, barley, wheat, oats, canola, flaxseed, soybeans, peanuts, and safflower. (Their study can be accessed on-line at: http://farmdocdaily.illinois.edu/2015/08/estimated-national-2014-arc-co-and-plc-payments.html). Schnitkey and Zulauf did not estimate ARC-IC payments, given the lack of data on individual farm yields.

A similar conclusion about both PLC and ARC-CO payments for corn and soybeans is offered by the Farm&Ranch Guide (accessed on-line at: http://www.farmandranchguide.com/news/crop/arc-co-payments-likely-to-crop-producers/article_38fa78e4-58a8-11e5-9c16-fbaae8b6d21b.html). In addition, a recently published study by Brad Lubben at University of Nebraska projects substantial ARC-CO payments in Nebraska but notes that payments will likely vary significantly by county, even for the same crop, due to county-by-county variability in yield histories (accessed on-line at: http://agecon.unl.edu/farm-program-payments-and-protection-under-arc-and-plc).

Table 2. Reference prices, national loan rates, and market year average prices for selected covered commodities, 2014-2015 market year (September 29, 2015)

	Reference price	National loan rate	Market year average (projected P or final F)
Barley	$4.95 per bu.	$1.95 per bu.	$5.30 per bu. F
Canola	$20.15 per cwt.	$10.09 per cwt.	$17.00 per cwt. P
Corn	$3.70 per bu.	$1.95 per bu.	$3.70 per bu. F
Dry peas	$11.00 per cwt.	$5.40 per cwt.	$12.00 per bu. F
Flax	$11.28 per bu.	$5.65 per bu.	$11.80 per bu. P
Grain sorghum	$3.95 per bu.	$1.95 per bu.	$4.03 per bu. F
Oats	$2.40 per bu.	$1.39 per bu.	$3.21 per bu. F
Safflower	$20.15 per cwt.	$10.09 per cwt.	$25.00 per cwt. P
Soybeans	$8.40 per bu.	$5.00 per bu.	$10.10 per bu. F
Sunflower	$20.15 per cwt.	$10.09 per cwt.	$22.25 per cwt. P
Wheat	$5.50 per bu.	$2.94 per bu.	$5.99 per bu. F

Sources: Reference prices and loan rates are from FSA, accessed on-line at: http://www.fsa.usda.gov/FSA/NewsReleases?area=newsroom&subject=landing&topic=pfs&newstype=prfactsheet&type=detail&item=pf_20150615_insup_en_arcplc.html. Market year average prices (final and projected) are from FSA, accessed on-line at: http://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/arc-plc/pdf/2014_mya.pdf

WHICH PROGRAMS DID U.S. AND WYOMING PRODUCERS ELECT?

Table 3 shows program election choices by all participating U.S. farms for all eligible commodities of potential interest to Wyoming. Nationally, farmers with corn, oat, soybean, and wheat base acres clearly favored ARC-CO participation over PLC participation. Nationwide, 76 percent of all base acres were elected into ARC-CO. Very few U.S. farms elected ARC-IC, possibly due to the larger farm data collection and reporting requirements.

On the other hand, on the national level, base acres of barley, canola, flaxseed, grain sorghum, safflower, and sunflower seed were more likely to be elected into the PLC program. PLC is the default program for producers who don't make a definitive program election, so some acreage may be enrolled in PLC because farmers simply went with the default option rather than because they determined PLC would be a better choice than ARC-CO or ARC-IC.

How do Wyoming's election choices compare? Table 4 shows the number of Wyoming farms and base acres elected into each of the ARC/PLC programs. Like producers nationally, Wyoming producers favored ARC-CO for corn base acres. Wyoming's barley, grain sorghum, safflower and sunflower base acres were more often elected into PLC than into ARC-CO. Wyoming's base acres of oats and wheat were also more often elected into PLC, in contrast with the nationwide orientation toward ARC-CO for these two crops. A few Wyoming producers chose ARC-IC.

HOW MUCH OF WYOMING'S ELIGIBLE CROP PRODUCTION IS PROTECTED BY ARC/PLC PROGRAMS?

According to FSA, 495,395 Wyoming base acres were elected into ARC/PLC programs, which is somewhat fewer than the 520,438 base acres enrolled in the farm safety-net programs offered in 2013 through the previous

Table 3: Percent of all eligible U.S. farms and base acres on farms that made an ARC/PLC Election

	PLC		ARC-CO		ARC-IC		All ARC/PLC programs	
Commodity	**Farms**	**Base acres**	**Farms**	**Base acres**	**Farms**	**Base acres**	**Farms**	**Base acres**
Barley	57	75	42	22	1	4	100	100
Canola	93	97	7	2	1	1	100	100
Corn	9	7	91	93	0	0	100	100
Dry peas	44	44	53	50	3	6	100	100
Flax	59	63	40	36	1	1	100	100
Grain sorghum	54	66	46	33	0	0	100	100
Oats	23	32	76	67	0	1	100	100
Safflower	57	63	40	34	2	3	100	100
Soybeans	4	3	96	97	0	0	100	100
Sunflowers	49	56	50	43	1	1	100	100
Wheat	34	42	66	56	0	2	100	100

Source: FSA, accessed on-line at: http://www.fsa.usda.gov/programs-and-services/arcplc_program/index farm bill. While the total elected base acreage is smaller, protection for some Wyoming crops is higher under the new farm bill due to producers' base acreage reallocation decisions. More base acres of corn, sunflower, dry peas, flaxseed, and safflower are elected into ARC/PLC than were enrolled in the old programs, and fewer base acres of oats, wheat, barley, and sorghum (FSA, accessed on-line at: http://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/arc-plc/excel/Table_6_comparison_fo_2014_and_2013_bases_by_State.xlsx).

While we don't know the reason for the somewhat lower total election, the change to a new and complex set of programs that required farmers to make their own program elections may have induced some Wyoming owners and operators to opt out. Wyoming producers are possibly beginning to look more at other risk management options, such as the expanded federal crop insurance programs, and therefore feel less need for ARC/PLC protection. There was a slight increase in Wyoming acreage covered by crop insurance contracts from 2013 to 2014. These possibilities require more study.

To come up with a crude measure of ARC/PLC participation by eligible producers, we might compare total elected base acres of eligible crops with total planted acres of eligible crops. If total planted acres are notably larger than total ARC/PLC-elected base acres, we might conclude program participation is low; however, if total planted acres align with or are smaller than total elected base acres, we might conclude program participation among producers of eligible commodities is quite good.

According to USDA's National Agricultural Statistics Service (NASS) Wyoming Field Office, in 2014 Wyoming had a total of 360,000 acres planted to barley, corn, oats, and wheat, and no recorded acreage planted to other ARC/PLC-eligible crops (Table 5). This amount of planted acreage is considerably smaller than the 487,991 base acres of these four crops elected into ARC/PLC programs, suggesting eligible producers are taking good advantage of the ARC/PLC safety

Table 4: Wyoming farm counts and base acres on farms that made an ARC/PLC Election

	PLC		ARC-CO		ARC-IC		All ARC/PLC programs	
Commodity	**Farm count**	**Base acres**	**Farm count**	**Base acres**	**Farm count**	**Base acres**	**Farm count**	**Base acres**
Barley	1500	78,161.12	199	7466.6	14	1006.5	1713	86634
Canola	1	4.3					1	4
Corn	442	20,499.95	953	85,025.9	2	100.1	1397	105,626
Dry peas	4	320.92	5	145.32			9	466
Flax	1	60.4					1	60
Grain sorghum	13	150.46	10	44.21			23	195
Oats	843	20,572.79	260	5,979.12	13	467.4	1116	27,019
Safflower	7	207.84					7	208
Soybeans	4	9.37					4	9
Sunflowers	112	5,186.6	18	1223.38	2	51.95	132	6.462
Wheat	1,254	235,080.8	217	27,042.82	29	6588.05	1500	268,712

Source: FSA, accessed on-line at: http://www.fsa.usda.gov/programs-and-services/arcplc_program/index

Table 5: Comparison of ARC/PLC Base Acres and Planted Acres—Wyoming, 2014 Crop Year

Eligible commodity	ARC/PLC elected base acres	Recorded planted acres (2014)
Barley	86,634	80,000
Canola	4	0
Corn	105,626	90,000
Dry peas	466	0
Flax	60	0
Grain sorghum	195	0
Oats	27,019	30,000
Safflower	208	0
Soybeans	9	0
Sunflowers	6,462	0
Wheat	268,712	160,000
Total acres	**495,395**	**360,000**

net.[6] Like producers nationwide, Wyoming producers have tended to reallocate their base acres toward corn. The data also suggest Wyoming producers have shifted previous wheat acreage into more profitable crops or pasture.[7] Dry bean production, for example, has grown somewhat in Wyoming over the same period wheat production has declined, but dry beans are not eligible for ARC/PLC payments. Overall, it does appear that Wyoming growers are indeed using base acres of wheat, corn, barley, and oats (primarily) to provide a price or revenue safety net for their farm businesses.

HOW IMPORTANT IS THE FARM BILL SAFETY NET FOR WYOMING?

In addition to ARC/PLC program payments, or payments under the earlier farm safety net programs, Wyoming producers may receive disaster payments, Conservation Reserve Program (CRP) rental payments, cost-share payments for adopting conservation practices on working lands, marketing loan payments, and other forms of USDA payments. In 2013 direct payments from USDA to Wyoming agriculture totaled $46 million (*Wyoming Agricultural Statistics 2015*). Whether or not these payments are deemed important to Wyoming depends on to what they're compared: In the same year, the value of Wyoming's agricultural sector (including livestock production, crop production, and revenues from services and forestry) totaled $2,014.2 million. Direct payments, therefore, added 2.25 percent to the state's value of production. Additionally, direct payments equaled 16 percent of Wyoming net farm income of $288 million in the same year (*Wyoming Agricultural Statistics, 2015*). For some commodities, payments are clearly very important in some years. For example, in 2011 wheat program payments equaled 16 percent of wheat cash receipts. How important ARC/PLC payments will be for wheat and other Wyoming growers over the course of the 2014 farm bill remains to be seen.

[6] The other major Wyoming crops – hay, dry beans, and sugar beets – are not covered by the ARC/PLC programs, although other USDA programs can benefit producers of these non-covered crops.

[7] In 1987, Wyoming producers planted 270,000 acres of wheat, close to current elected wheat base acreage.