Updated: Jan. 2nd, 2020

KANSAS STATE UNIVERSITY
Agricultural Economics

OSU-KSU 2014 FARM BILL DECISION TOOL STEP-BY-STEP INSTRUCTIONS

By Robin Reid, Extension Associate, KSU

The OSU-KSU Decision Tool was designed to help producers compare the Price Loss Coverage (PLC), Agriculture Risk Coverage (ARC), and the Supplemental Coverage Option (SCO), to help make an election decision for the 2018 Farm Bill. Inputs that are needed for each FSA Farm number can be obtained by requesting a 156 EZ form from the local FSA office and having historical yield information. Market Year Average Prices and projected yields can be auto filled in the decision tool, but the best use of the tool is also to run different scenarios to evaluate high or low prices and yields.

Downloading the Spreadsheet

You will need a Windows computer with Microsoft Excel 2007 or newer to run this decision tool! It will not run on other programs, or older versions of Excel. You will also need to "***Enable Macros***" for the decision tool to work.

Download the spreadsheet from the Kansas State University website on AgManager.info or Oklahoma State University website at: http://agecon.okstate.edu/faculty/publications/farmbill%2031Jan2020.xlsm. By entering your email address on the KSU site, you will be notified when an updated version is available. As projected prices change and errors are fixed, updates will be posted.

If you already have your spreadsheet downloaded, you can click "Check for Updates" to make sure you have the most current version. Note: You can use the "Save Input" and "Load Previous File" buttons to save your work and upload into the newest version of the tool.

Using the Spreadsheet

Entering Data on the "Start" tab

*Note: Cells in yellow are values that you should enter. Other cells are unprotected and can be changed, but this is not recommended because it will alter tool calculations.

1.) Click "Select State/Territory" to get a pop-up menu. Select your state and click "Done"

2.) Click "Select County/Parish" to get a pop-up menu. Select your county and click "Done"

3.) Click "Select Crops" to get a pop-up menu. Click the box under dryland or irrigated to select it. Some counties will have a separate irrigated and dryland guarantee for ARC-County, and others will not. These are determined by FSA. If you select an irrigated crop in a county without an irrigated designation, it will simply use blended yield numbers in all ARC-County calculations. Select all crops for which you have base acres. If you want to look at ARC-Individual or SCO, also select crops that you have planted since 2013 and what you plan to plant through 2020, even if you do not have base in these commodities. Click "Done"

a. The tool will ask "Do you want to clear previously entered data?" on yields and prices. Click "Yes" unless you have been working with the tool already and have your own numbers entered.

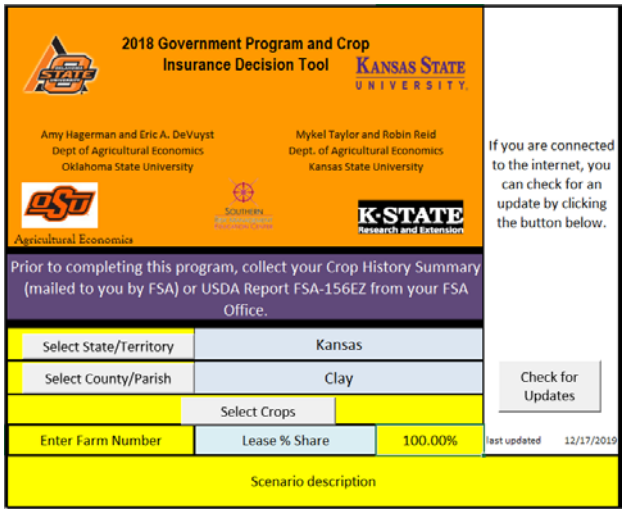
b. "Press okay and give me a few minutes to clear out old data" Click ok if you are sure you want to clear old data. The program may take several minutes to clear old data. The cursor will stop flashing when it is finished. If you do not want to clear old data, press the "Esc" button and it will return you to the menu described in 3.a.

c. If a box pops up that says "No yield data found for _____. Do you want to select a different crop?" Select "Yes" to return to the "select crops" menu. If you select "No" the tool will fill in the crop, but…

4.) The "Enter Farm Number" and "Enter Scenario" can be used to identify the farm and specific scenario you are working with. They are open cells to type whatever you like into. They do not have to be used.

5.) Enter Lease % Share. If you are cash renting or own the ground, leave this as 100%. Otherwise enter the percentage of output (yield) you will be receiving. This will factor into all result calculations and assumes you will receive this percentage of payments.

Figure 1. Main Decision Tool Screen. Select your State, County, and Crops, and Lease % Share.



6.) Now you are ready to start entering numbers (Figure 2). The first two columns will ask you to enter Base Acres and FSA (CC) Yield. These are your current numbers that can be found on form 156 EZ from your FSA office.

a. If you have irrigated and non-irrigated acres, you technically will not have base acres separated between the two practices, but if your county has an irrigation designation your ARC-County payments will have separate guarantees and your base will be assigned a proportion to each based on a Historical Irrigation Percentage (HIP). (See publication http://www.agmanager.info/ag-policy/2018-farm-bill/2018-farm-bill-arc-co-irrigation-designations-kansas) To handle this, estimate the percentage of the crop that was irrigated and non-irrigated from 2013-2017 and divide your base up accordingly. For example, if you have

100 acres of corn base and half of your corn production was irrigated in 2013-2017, enter 50 acres for irrigated and 50 acres for non-irrigated. Ask your FSA office for assistance if needed.

i. Enter your same FSA yield for both irrigated and non-irrigated crops. FSA yield is not divided by irrigation practice, so make sure to enter the same number for both practices. It will reflect a blended yield on your farm for both practices.

7.) Next you need to enter your farm level yields from 2013-2017 for the tool to calculate your Updated Payment Yield. Only enter yields for the years that you planted the crop; leave year's blank when no acres were planted. The 2018 yield is need if you are considering ARC-Individual; you can leave it blank if not.

a. Note that this is a blended yield between irrigation practices. Take the total bushels of production divided by the total planted acres to obtain a blended yield and enter it for both irrigated and dryland crops.

8.) The tool will calculate your Updated Yield by running the 2018 Farm Bill formula of replacing low yields with the county yield "plug" and multiplying by the appropriate percentages. (See publication http://www.agmanager.info/ag-policy/2018-farm-bill/payment-yield-update). *Your Updated Yield will be the higher of the current FSA Yield or the calculated Yield Update based on yield history.*

Figure 2. Main Decision Tool Screen to enter Base Acres, FSA Yield, 2013-2018 Yields

Enter FARM Yields and Base Acres										
Crop	units	Base Acres	FSA Yield	2013	2014	2015	2016	2017	2018	Updated yield
Corn	bu/ac	50	180	213.2	178.4	193.7	169.3	183.9	192.1	180.00
Corn-Irr	bu/ac	50	180	213.2	178.4	193.7	169.3	183.9	192.1	180.00
Wheat_Winter	bu/ac	100	38	45.3	48.2	35.4	40.7	50.1	48.5	39.11

9.) Next you will be asked to enter Projected County-Level Crop Yields (Figure 3). These will be used to calculate ARC-County payments and SCO. If you double click an average value will auto-fill. Since the 2019 crop is already harvested (but yields not yet released), you may want to adjust the average value up or down based on how well you think the 2019 crop performed.

a. Note: If a county does have an irrigation designation for the crop, the projected yields will be based on the irrigated and dryland practices.

Figure 3. Entering Projected County-Level Yields

Enter Projected County-Level Crop Yields						
Crop	units	2019	2020	2021	2022	2023
Corn	bu/ac	131	131			
Corn-Irr	bu/ac	211	211			
Wheat_Winter	bu/ac	52	52			

10.) Next enter Marketing Year Average price forecasts for 2019-2020 (Figure 4). By double clicking, the tool will automatically fill in Food and Agricultural Policy Research Institute (FAPRI) forecasts from the University of Missouri. It would be best to run the tool using these estimates, but also run some scenarios with lower and higher than expected prices. Prices for the next 2 years will determine what program will pay the most. This is the most critical piece of decision tool input.

Figure 4. Entering Projected Crop Prices

Enter Projected Crop Prices						
Crop	units	2019	2020	2021	2022	2023
Corn	$/bu	3.85	3.53			
Corn-Irr	$/bu	3.85	3.53			
Wheat_Winter	$/bu	4.58	4.73			

11.) To evaluate ARC-Individual and SCO, you will also need to Enter Projected Farm-Level Yields and Projected Planted Acres (Figure 5). You can double click to auto fill and average yield for the farm based on your 2013-2018 yields entered above.

a. Note that you will again want to enter a blended yield between irrigation practices

Figure 5. Entering Farm-Level Projected Yields and Planted Acres

Enter Projected Farm-Level Yields						
Crop	units	2019	2020	2021	2022	2023
Corn	bu/ac	170	188			
Corn-Irr	bu/ac	170	188			
Wheat_Winter	bu/ac	48	45			

Enter Projected Planted Acres						
Crop	units	2019	2020	2021	2020	2023
Corn	acres	50	0			
Corn-Irr	acres	50	50			
Wheat_Winter	acres	100	150			

12.) Now all of the inputs that are need on the main screen should be filled in. Click the button on the right side of the tool to "Go to ARC-County", "Go to PLC", "Go to ARC-Individual", "Go to SCO" or "Go to Results". This may take a minute as results are loaded.

View ARC-County Results

13.) The ARC-County screen shows the results of the scenario you entered if all crops were enrolled in ARC-County (Figure 6)

a. The first rows show the yield history of your county that are used to set the "2019 Yield Guarantee". If you received a warning in the crop selection step that "No yield data found for _____. Do you want to select a different crop?" and proceeded anyway, the row for that crop will be blank.

b. The second set of rows shows the Projected 2019 and 2020 County-Level Yields you entered on the main input screen

c. The third set of rows shows the Projected Marketing Year Average Prices for 2019 and 2020 you entered on the main input screen.

d. The fourth set of rows shows the Marketing Year Average Prices for 2013-2017 that are used in the Olympic Average calculation to set the 2019 Price Benchmark.

Figure 6. ARC-County Results Page (top part)

ARC-County Crop Yield Data for Your **County**						
Crop	**2013 Yield**	**2014 Yield**	**2015 Yield**	**2016 Yield**	**2017 Yield**	**2019 Yield Guarantee**
Corn	119.5	125.2	155.3	132.9	122.2	126.8
Corn-Irr	205.8	225.0	219.9	188.4	214.3	213.3
Wheat_Winter	58.8	38.3	44.5	59.1	59.4	54.1
Crop	**2019 Yield**	**2020 Yield**	**2021 Yield**	**2022 Yield**	**2023 Yield**	
Corn	131.0	131.0				
Corn-Irr	211.0	211.0				
Wheat_Winter	52.0	52.0				
Crop	**2019 Price**	**2020 Price**	**2021 Price**	**2022 Price**	**2023 Price**	
Corn	$ 3.852	$ 3.530	$ -	$ -	$ -	
Corn-Irr	$ 3.852	$ 3.530				
Wheat_Winter	$ 4.584	$ 4.734				
Crop	**2013 Price**	**2014 Price**	**2015 Price**	**2016 Price**	**2017 Price**	
Corn	$ 4.460	$ 3.700	$ 3.610	$ 3.360	$ 3.360	
Corn-Irr	$ 4.460	$ 3.700	$ 3.610	$ 3.360	$ 3.360	
Wheat_Winter	$ 6.870	$ 5.990	$ 4.890	$ 3.890	$ 4.720	

14.) Results continue below these values (Figure 7).

a. The next set of rows shows you the Base Acres in each commodity (with irrigated acres split if necessary), the loan rate, the effective reference price, and the Benchmark Prices for 2019 and 2020. These values are all important in setting the guarantees for ARC-County.

b. The 2019 Benchmark is 5-year Olympic Average Price multiplied by the 5-year Olympic Average Yield. The 2019 ARC Guarantee is 86% of this value. The Actual Revenue is the Projected 2019 County Yield multiplied by the 2019 Projected Price. If Actual Revenue is below the 2019 ARC Guarantee, then there will be a payment listed under "2019 Payment Rate". This payment cannot exceed 10% of the Benchmark Revenue, so the 2019 Max Payment is also listed. These are all on a per-acre basis.

c. The total payments are listed below under "ARC-County Payments Paid on 85% of Base Acres and 100% Share". For the example farm, ARC-County payment for wheat base acres would be received in 2019 and 2020 at $2,122 and $827 respectively.

Figure 7. ARC-County Results Page (bottom part)

Crop	Base Acres	Loan Rate	Effective Ref Price	Benchmark Price 2019	Benchmark Price 2020
Corn	50.0	$ 2.2000	$ 3.70	$ 3.70	$ 3.70
Corn-Irr	50.0	$ 2.2000	$ 3.70	$ 3.70	$ 3.70
Wheat_Winter	100.0	$ 3.3800	$ 5.50	$ 5.66	$ 5.50

Crop	2019 ARC Benchmark	2019 ARC Guarantee	2019 Actual Revenue	2019 Payment Rate	2019 Max Payment
Corn	$ 469.16	$ 403.48	$ 504.61	$ -	$ 46.92
Corn-Irr	$ 789.21	$ 678.72	$ 812.77	$ -	$ 78.92
Wheat_Winter	$ 306.21	$ 263.34	$ 238.37	$ 24.97	$ 30.62

Crop	ARC-County Payments Paid on 85% of Base Acres and 100% Share				
	2019	2020	2021	2022	2023
Corn	$ -	$ -			
Corn-Irr	$ -	$ -			
Wheat_Winter	$ 2,122	$ -			
Totals	$ 2,122	$ -			

15.) Note that you can also do "ARC-County Sensitivity Analysis" (Figure 8).

a. You can change yields or prices up or down by a percentage of what you inputted in the main screen. In this example, yields came in at 75% of the projected bushels but prices were 110% of projected levels. ARC-County payments increased for both commodities.

Figure 8. ARC-County Results Page-Sensitivity Analysis

Crop	ARC-County Sensitivity Analysis			Yield Change	75%	Price Change	110%
	2019	2020	2021	2022		2023	
Corn	$ -	$ 1,326					
Corn-Irr	$ 348	$ 1,797					
Wheat_Winter	$ 2,603	$ 1,634					
Totals	$ 2,951	$ 4,757					

View PLC Results

16.) At the right of the screen, click "Go to PLC".

a. The prices that you entered on the main screen will automatically fill in. You do not need to enter any additional information for PLC (Figure 9).

b. Payments are made when current year price falls below the effective reference price (PLC Payment Price). In this case, the 2019 Projected Price for corn is above $3.70 so there are no PLC payments but the 2019 Projected Wheat price is below $5.50 so there is a PLC Payment rate on wheat of $0.92 per bushel.

c. The Payment Rate gets multiplied by the Current FSA yield for 2019 and the Updated FSA yield for 2020, and the by 85% of the base acres in that commodity. In this case, wheat is getting a payment in 2019 and 2020, but corn will only receive a payment in 2020. Note that irrigation designations do not matter in PLC, so the same payment rate will always be listed for each commodity.

Figure 9. PLC Results page

Price Loss Coverage Calculations

Crop	2019 Price	2020 Price	2021 Price	2022 Price	2023 Price
Corn	$ 3.852	$ 3.530			
Corn-Irr	$ 3.852	$ 3.530			
Wheat_Winter	$ 4.584	$ 4.734			

Crop	Current FSA Yield	Loan Rate	PLC Payment Price 2019	Yield Factor for Updating	Updated FSA Yield	PLC Payment Rate 2019
Corn	180	$ 2.20	$ 3.70	0.9000	180	$ -
Corn-Irr	180	$ 2.20	$ 3.70	0.9000	180	$ -
Wheat_Winter	38	$ 3.38	$ 5.50	0.9767	39	$ 0.92

PLC Payments with HIGHEST FSA Yields and 100% Share

Crop	Base Acres	PLC Payment 2019	2020	2021	2022	2023
Corn	50	$ -	$ 1,301			
Corn-Irr	50	$ -	$ 1,301			
Wheat_Winter	100	$ 2,959	$ 2,546			
Totals		$ 2,959	$ 5,147	$ -	$ -	$ -

17.) Like ARC-County, PLC also has the option to do a "Sensitivity Analysis" (Figure 10). This is where you can vary prices by a percentage and see how payment react. In this case, if prices increased 110%, PLC payments are eliminated for corn and reduced for wheat.

Figure 10. PLC Results page-Sensitivity Analysis

Sensitivity Analysis PLC Payments with HIGHEST FSA Yields						Vary Projected Prices	110%
Crop	Base Acres	PLC Payment 2019	2020	2021	2022	2023	
Corn	50	$ -	$ -				
Corn-Irr	50	$ -	$ -				
Wheat_Winter	100	$ 1,478	$ 973				
Totals		$ 1,478	$ 973	$ -	$ -	$ -	

If the user only wants to evaluate ARC-County and PLC, then they may go to the "Results Page" from here.

View ARC-Individual Results

18.) The next step would be to look at ARC-Individual, if the user desires to do so. Keep in mind it only pays on 65% of total base acres and all commodities must be enrolled together to set the guarantee and determine a loss. At the right side of the screen, click "Go to ARC-Individual"

a. The 2014-2020 yield are displayed as entered on the Start screen as well as the 2013-2020 prices. (Figure 11).

b. The base acres of each commodity are listed, but results are given at the whole farm level as payments are made on 65% of total base, weighted by the acres of each commodity planted in each year.

c. Benchmark Revenue is calculated based on historical revenue of the farm (farm-level yields and national prices). The ARC Guarantee is 86% of the Benchmark Revenue. The Actual Revenue is the projected yields times the projected prices. If Actual Revenue is below the ARC Guarantee, then there will be a payment listed under "Payment Rate". This payment cannot exceed 10% of the Benchmark Revenue, so the Max Payment is also listed. These are all on a per-acre basis.

d. The whole-farm 2019 and 2020 ARC-Individual Payment is then listed. In this particular example, no payment would be anticipated. (Figure 12).

e. Sensitivity Analysis as described in other sections above is also available here. (Figure 12).

Figure 11. ARC-Individual Results Page (top part)

ARC-Individual Crop Yield Data for **YOUR** Farm						
Crop	**2014 Yield**	**2015 Yield**	**2016 Yield**	**2017 Yield**	**2018 Yield**	**Units**
Corn	178.4	193.7	169.3	183.9	192.1	bu/ac
Corn-Irr	178.4	193.7	169.3	183.9	192.1	bu/ac
Wheat_Winter	48.2	35.4	40.7	50.1	48.5	bu/ac
Crop	**2019 Yield**	**2020 Yield**	**2021 Yield**	**2022 Yield**	**2023 Yield**	**Units**
Corn	170.0	188.0				bu/ac
Corn-Irr	170.0	188.0				bu/ac
Wheat_Winter	48.0	45.0				bu/ac
Crop	**2013 Price**	**2014 Price**	**2015 Price**	**2016 Price**	**2017 Price**	
Corn	$ 4.460	$ 3.700	$ 3.610	$ 3.360	$ 3.360	
Corn-Irr	$ 4.460	$ 3.700	$ 3.610	$ 3.360	$ 3.360	
Wheat_Winter	$ 6.870	$ 5.990	$ 4.890	$ 3.890	$ 4.720	
Crop	**2019 Price**	**2020 Price**	**2021 Price**	**2022 Price**	**2023 Price**	
Corn	$ 3.852	$ 3.530				
Corn-Irr	$ 3.852	$ 3.530				
Wheat_Winter	$ 4.584	$ 4.734				

Figure 12. ARC-Individual Results Page (bottom part)

Crop	**Base Acres**	**Loan Rate**	**Effective Ref Price**	**Olympic avg Revenue**	**Benchmark Rev 2019**
Corn	50	$ 2.200	$ 3.700	$702.63	$175.66
Corn-Irr	50	$ 2.200	$ 3.700	$702.63	$175.66
Wheat_Winter	100	$ 3.380	$ 5.500	$255.38	$127.69

ARC Individual Results 100% Share					
Farm	**2019**	**2020**	**2021**	**2022**	**2023**
Benchmark Rev.	$ 479.01	$ 359.15			
ARC Guarantee	$ 411.95	$ 308.87			
Actual Revenue	$ 910.24	$ 979.30			
Payment Rate	$ -	$ -			
Max Payment	$ 47.90	$ 35.92			
	ARC-Individual Payments Paid on 65% of Total Base Acres 100% Share				
	2019 ARC Payment	**2020 ARC Payment**	**2021 ARC Payment**	**2022 ARC Payment**	**2023 ARC Payment**
Payments	$ -	$ -			

Sensitivity Analysis	**ARC-Individual Payments Paid on 65% of Total Base Acres**			**Vary Yields**	**100%**	**Vary Prices**	**100%**
	2019 ARC Payment	**2020 ARC Payment**	**2021 ARC Payment**	**2022 ARC Payment**		**2023 ARC Payment**	
Payments	$ -	$ -					

View Results for the Supplemental Coverage Option (SCO) for Crop Insurance Available with PLC

19.) The last screen to work through before comparing all results is SCO. At the right side of the screen, click "Go to SCO".

a. SCO is tied to the crop insurance contract, so this screen needs information about your crop insurance. You will need to have had entered planted acres from 2014-2018 on the main screen for SCO to calculate.

b. Prices are already brought in from what you entered on the main screen for the top set of prices.

Figure 13. SCO Screen Needing Crop Insurance Inputs

Supplemental Coverage Option Calculations

Crop	2019 Price	2020 Price	2021 Price	2022 Price	2023 Price
Corn	$ 3.852	$ 3.530	$ -	$ -	$ -
Corn-Irr	$ 3.852	$ 3.530	$ -	$ -	$ -
Wheat_Winter	$ 4.584	$ 4.734	$ -	$ -	$ -

Crop	Crop Insurance	Coverage Level	SCO Yield	Max SCO Coverage	Payment multiplier	SCO Premium
Corn	RP	70%	120.0	86%	100%	$ 3.00
Corn-Irr	RP	70%	209.2	86%	100%	$ 3.00
Wheat_Winter	RP-HPE	60%	49.0	86%	100%	$ -

Crop	Projected Price when Insurance is Purchased				
	2019	2020	2021	2022	2023
Corn	$ 3.85	$ 3.53			
Corn-Irr	$ 3.85	$ 3.53			
Wheat_Winter	$ 4.58	$ 4.73			

Wheat_Winter	Projected Harvest Price				
	2019	2020	2021	2022	2023
Corn	$ 3.85	$ 3.53			
Corn-Irr	$ 3.85	$ 3.53			
Wheat_Winter	$ 4.58	$ 4.73			

c. Next you will need to select your Crop Insurance type and Coverage Level. Double click on these cells for a pop-up screen to make your selections (Figure 13).

i. Select you crop insurance type from the options of Risk Protection, Risk Protection with Harvest Price Exclusion, or Yield Protection.

ii. Select coverage level from 50-85%.

d. Because SCO is triggered on the county yield, you are also prompted to find a county yield (Figure 14). SCO county yields are reported from the Risk Management Agency (RMA) and are different from FSA county yields. RMA yields are broken down into specific commodities and

specific production practices. You will need to try different commodity types, irrigation, and cropping practices to find what yield is available in your county. Double click in a yellow cell to selection an option for each crop.

i. It may take little time to search. A separate screen will open. Click in a yellow cell to selection the yield for SCO. A box will pop up that shows the yield and asks you "Use this yield?" Click "Yes" to confirm. You should be able to find a yield with the correct combination of choices. You will automatically be taken back to the "SCO Yields" entry page. Repeat for each crop.

ii. For crops that RMA does not have a yield a warning will appear when you double click the yellow cell saying you may manually enter the yield. A light yellow alert box will appear that says, "If yield is reported as zero, then USDA RMA yield was not found for this crop/type/practice. Contact your crop insurance agent to see if SCO is available for this county/crop/type/practice and enter the yield here."

iii. Click "Return to SCO tab" to keep entering SCO data. It may take a moment to load.

Figure 14. SCO Screen to find county yield and associated pop-up menu

SCO Yield

	Corn	Corn-Irr	Wheat_Winter			
SCO Yield	120.0	209.2	Double Click			

Commodity	State	County	Type	Practice	Commodity type	Irrigation practice	Cropping practice	Organic practice	Interval	Expected county yield	Use this yield (Y/N)
Wheat	Kansas	Clay	Winter	Irrigated	No Commodity Type Specified	Irrigated	No Cropping Practice Specified	No Organic Practice Specified	No Interval Specified	59.8	
Wheat	Kansas	Clay	Winter	Non-Irrigated	No Commodity Type Specified	Non-Irrigated	No Cropping Practice Specified	No Organic Practice Specified	No Interval Specified	49	Double Click
Wheat	Kansas	Clay	Winter	Organic(Certified) Irr.	No Commodity Type Specified	Irrigated	No Cropping Practice Specified	Organic(Certified)	No Interval Specified	59.8	
Wheat	Kansas	Clay	Winter	Organic(Transitional) Irr.	No Commodity Type Specified	Irrigated	No Cropping Practice Specified	Organic(Transitional)	No Interval Specified	59.8	
Wheat	Kansas	Clay	Winter	Organic(Certified) Non-Irr.	No Commodity Type Specified	Non-Irrigated	No Cropping Practice Specified	Organic(Certified)	No Interval Specified	49	
Wheat	Kansas	Clay	Winter	Organic(Transitional) Non-Irr.	No Commodity Type Specified	Non-Irrigated	No Cropping Practice Specified	Organic(Transitional)	No Interval Specified	49	

e. To the right of the SCO Yield, enter the SCO premiums. Talk to your crop insurance agent for information on this.

f. Enter projected price when insurance is purchased and projected harvest price. Double-click in the yellow cell to automatically fill in FAPRI prices here as well, but don't be afraid to make your own price selections. Projected prices should be available though you crop insurance agent at the time of insurance purchase.

g. The results will be at the bottom of this screen. Premiums will show for years that the commodity is planted but does not kick in a SCO payment, as is the case with this example. Estimated payments will be seen in years that payments may kick in based on projected prices and yields. (Figure 15).

i. Remember SCO is based on planted acres, not base acres. If the results cells are blank, you may have entered a zero acres planted on the "Start" page.

Figure 15. SCO estimated Net Present Value of Payments

Crop	SCO Payments Net of Premiums Given Entered Yields				
	2019	2020	2021	2022	2023
Corn	$ (150)	$ (150)			
Corn-Irr	$ (150)	$ (150)			
Wheat_Winter	$ -	$ -			
Totals	$ (380)	$ (380)			

Crop	SCO Sensitivity Analysis		Vary Yields	60%	Vary Prices	70%
	2019	2020	2021	2022		2023
Corn	$ 3,150	$ 2,900				
Corn-Irr	$ 5,200	$ 4,750				
Wheat_Winter	$ 2,000	$ 2,100				
Totals	$ 10,270	$ 9,670				

View Comparison of Results

20.) Now you can compare the total set of results. On the right side of the screen, click "Go to Results".

a. You will see 2019 Projected Payments and 2020 Projected Payments for each crop, for each Farm Bill program. Recall, from the "Start" page that the 2020 PLC Project Payment calculates based on the highest FSA yield between your current yield and updated yield. The yield update does not apply to the 2019 crop year.

b. Projected payments for the two years together are shown on the bottom for the scenario you are running (Figure 16).

c. As with other results pages, you have the option of varying prices and yields to see the effect on payments (Figure 17). In this example, a decline in yield to only 75% of yield expectations results in a change in projected payment rankings between ARC-CO and PLC.

d. You can also view results in a graphical form. Press "Graph Results by Crop" (see Figure 18) to get a pop up menu to select the crop you want to look at. You will get an individual graph for that crop. You can also "Print Graph".

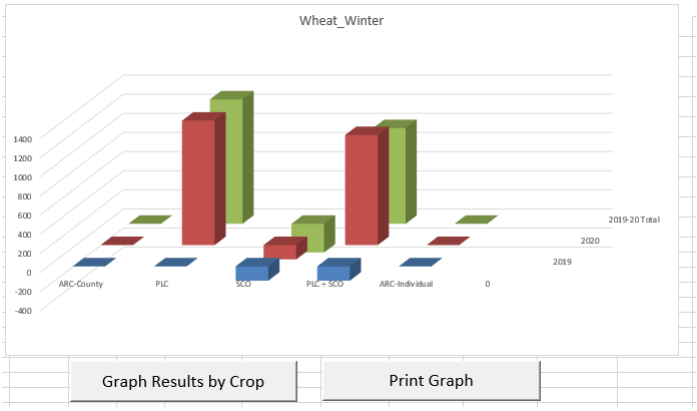
Figure 16. Results Screen showing Net Present Value Projections

	2019 Projected Payments				
Program Crop	ARC-County	PLC	SCO	PLC + SCO	ARC-Individual
Corn	$0	$0	-$150	-$150	--
Corn-Irr	$0	$0	-$150	-$150	--
Wheat_Winter	$2,122	$2,959	$0	$2,959	--
Totals	$2,122	$2,959	-$300	$2,659	$0
	2020 Projected Payments				
Program Crop	ARC-County	PLC Highest FSA Yields	SCO	PLC + SCO	ARC-Individual
Corn	$0	$1,301	-$150	$1,151	--
Corn-Irr	$0	$1,301	-$150	$1,151	--
Wheat_Winter	$0	$2,546	$0	$2,546	--
Totals	$0	$5,147	-$300	$4,847	$0
	2019-2020 Total Projected Payments				
Program Crop	ARC-County	PLC Highest FSA Yields	SCO	PLC + SCO	ARC-Individual
Corn	$0	$1,301	-$300	$1,001	--
Corn-Irr	$0	$1,301	-$300	$1,001	--
Wheat_Winter	$2,122	$5,505	$0	$5,505	--
Totals	$2,122	$8,106	-$600	$7,506	$0

Figure 17. Results Sensitivity Analysis

Scenario description		Vary Yields	75%	Vary Prices	100%
	2019 Projected Payments				
Program Crop	ARC-County	PLC	SCO	PLC + SCO	ARC-Individual
Corn	$1,063	$0	-$150	-$150	--
Corn-Irr	$2,939	$0	-$150	-$150	--
Wheat_Winter	$2,603	$2,959	$0	$2,959	--
Totals	$6,605	$2,959	-$300	$2,659	$0
	2020 Projected Payments				
Program Crop	ARC-County	PLC Highest FSA Yields	SCO	PLC + SCO	ARC-Individual
Corn	$2,040	$1,301	-$150	$1,151	--
Corn-Irr	$3,382	$1,301	-$150	$1,151	--
Wheat_Winter	$2,426	$2,546	$0	$2,546	--
Totals	$7,848	$5,147	-$300	$4,847	$0
	2019-2020 Total Projected Payments				
Program Crop	ARC-County	PLC Highest FSA Yields	SCO	PLC + SCO	ARC-Individual
Corn	$3,103	$1,301	-$300	$1,001	--
Corn-Irr	$6,321	$1,301	-$300	$1,001	--
Wheat_Winter	$5,029	$5,505	$0	$5,505	--
Totals	$14,453	$8,106	-$600	$7,506	$0

Figure 18. Graphical Results for Estimated Payments for Corn



21.) Now you have worked through the entire tool. Remember to look at high/low prices and different ARC yield scenarios. The results of the decision tool are driven on your projections going forward.

22.) Please report any errors in the decision tool and questions you may have to the contacts listed on the spreadsheet.

THANK YOU FOR USING THE OSU-KSU FARM BILL DECISION TOOL!