

## THE KSU FARM BILL SPREADSHEET (Version 11.18.02)

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The *KSU Farm Bill Spreadsheet* for the 2002 Farm Bill is designed to assist agricultural producers and landowners in making acreage and yield base decisions during sign-up of the Farm Security and Rural Investment Act of 2002.<sup>1</sup> As explained in the farm bill fact sheet *The New Farm Bill and Commodity Programs: As Simple As 1, 2, 3?*, three important decisions must be made prior to program sign-up. First, producers must decide whether to participate in the new Farm Bill. Second, if producers participate, they must decide whether to keep their current acreage base with the option to include oilseeds, or update their entire acreage base. Finally, if producers update acreage base, they will have to decide whether they want to update program yields for the counter-cyclical payments.

The Microsoft Excel spreadsheet contains seven sheets or pages that will aid users in making the complex acreage and yield base update decisions. The first sheet is the *Intro* sheet. It briefly describes the organization of the spreadsheet, much like this introduction. The *Acreage* sheet is the first user input section of the spreadsheet. On this page, producers can compare their existing acreage base to the crops planted from 1998-2001. This, and other information will then be used to help producers determine whether they should update their acreage base. The *Yields* sheet provides the input section for crop yields. Existing program yields and actual production yields from 1998-2001 are needed to evaluate all acreage and yield update options. If producers update acreage base, they have the option to update yields using one of two formulas, or they can keep their existing payment yields. The *Prices* sheet is the input section for commodity program payment rates and commodity price projections which are required to estimate counter-cyclical payments for the duration of the Farm Bill. The *Calculations* sheet computes the fixed and counter-cyclical payments for the acreage and yield update options. The *Summary* sheet summarizes the results of the acreage and yield base alternatives from the *Acreage*, *Yields*, *Prices*, and *Calculations* pages. Finally, the *Kansas Average Yields* sheet provides county yield data (when available) for 15 program crops in Kansas.

In the spreadsheet, blue numbers and text are inputs provided by the user. Black numbers are calculated values based on the inputs. Cells that contain little red diamonds in the upper, right corner provide additional information or instructions in the spreadsheet. These comments can be viewed when

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<sup>1</sup> This spreadsheet is for educational purposes only. No guarantees are made regarding government program payment levels or options. This spreadsheet is developed and updated based on the latest interpretation of USDA Farm Service Agency rules for Farm Bill implementation as of the date indicated by the spreadsheet version number. Only USDA-FSA can provide a final determination regarding any question or rule.

the mouse pointer is dragged over the diamond. If a number appears in red, it indicates the number is invalid. Refer to the cell comments or warnings for further instructions.

## **ACREAGE SHEET**

### **Step 1**

The *Acreage* sheet begins with a section in which the user can enter their name, address, farm number, and select their county from a pull-down menu. Although the name, address, and farm number inputs are not required, it is necessary to select the appropriate county from the pull-down menu. County selection is needed to figure county “plug” yields. Producers have the option of using a “plug” yield of 75% of the 1998-2001 average county yield for any year their crop yields below that figure or for years in which they cannot provide verifiable yield records.

Again, while not required, the farm number provides a reference for the user, as each farm number can be analyzed separately, and sign-up decisions are by farm number.

### **Step 2**

After the name, address, farm number, and county selection steps have been finished, the next step in filling out the *Acreage* sheet is to select the appropriate program crops that were planted from 1998-2001 in Table 1. Each crop planted over the past four years and/or in the existing acreage base can be selected from pull-down menus that list 14 program crops in Kansas. For each crop that is planted, enter the number of acres for each year that crop was planted. For each year, enter the number of irrigated and non-irrigated acres for each crop. Users can include up to 12 crops from the crop pull-down menus. If less than 12 crops are included, make sure to enter “0” into the cells of the rows that are not used.

### **Step 3**

The next step to take in Table 1 is to enter the existing or “old” base acres (listed on FSA reports as 2002 PFC acres) for each program crop in the “Existing (Old) Base Acres” column. If any oilseed crops have been added in the last four years, then the average number of acres per oilseed crop per year will automatically be entered in the “1998-2001 Oilseeds” column. These numbers are transferred from the Total New Base Acres column. If the total “Adjusted (Old) Base + Oilseeds” in cell Q24 is greater than the total “Old Base + Average Eligible Oilseeds” in cell L29, a one-for-one acre adjustment must be made so that “Adjusted Old Base + Oilseeds” equals “Old Base + Average Eligible Oilseeds”. To do this, enter a negative number in the “Acre Adjustment” column for the number of acres of the crop to subtract off the base.

Maximum eligible oilseeds in a given year equal total acres of covered commodities minus total existing (old) base acres. 1998-2001 average eligible oilseeds equal the average maximum eligible oilseeds or the average 1998-2001 planted acres of all oilseeds, whichever is less (but not less than 0). If oilseeds have been planted in 1998-2001, but average eligible oilseeds equal zero, oilseeds can still be added to the existing base. However, existing base acres of other crops must be reduced for every acre of

oilseeds added. Table 6 of the *Calculations* sheet can help users decide which crop base to subtract when adding oilseeds to the old base. This table shows the estimated government payments per acre for all program crops. The crops with the lowest payment per acre should be subtracted in lieu of those with higher payments per acre.

## **YIELDS SHEET**

### **Step 1**

The *Yields* sheet provides the input section for program crop yields. In the first section of Table 2, users enter their actual total production (not yield per acre) for each program crop from 1998-2001. Section A will calculate yields per acre based on the actual production information provided by the producer in the previous section. Section B of Table 2 is the section where “plug” yields of 75% of the 1998-2001 county average yield will be displayed based on the county and program crops selected from the pull-down menus in the *Acreage* sheet. Section C of Table 2 allows the user to enter alternative yields if any unique circumstances require FSA to assign specific yields to the farm. Users should yields in Section C **if and only if** they have a unique situation that requires FSA to assign “special” yield. This “special” or “alternative” yield may occur, for example, when a farmer has produced corn silage that has been fed on the farm and thus cannot verify yields. In this case, FSA may provide an “alternative” yield to use for those years in which yields cannot be verified for some crops. If this situation is not relevant for a farm, the cells should be left blank.

From these three yield sources, the applicable yield is determined for each year the crop is planted. The “new” yield for the farm is then calculated based on a weighted-average (from irrigated and non-irrigated acres) of maximum applicable annual yields.

### **Step 2**

Table 3 of the *Yields* sheet shows the yields for direct (fixed) and counter-cyclical payments. As previously mentioned, direct payment yields cannot be updated, but there are three payment yield options for counter-cyclical payments. The “Existing (Old) Program Yields” column of Table 3 is where existing payment yields for each existing program crop are entered. These yields are provided by FSA and are listed as “2002 PFC Yields” on FSA reports. If a “new” non-oilseed crop (i.e. a program crop without an existing base) has been planted during 1998-2001, FSA will assign a yield for that crop based on similar farm yields. These “assigned” yields are to be entered in the “FSA Assigned Program Yields” column. Only one yield can be entered for each crop in the “Existing (Old) Program Yields” or “FSA Assigned Program Yields” columns. Do **NOT** enter yields for any one crop in both columns.

Oilseed crops do not have an existing payment yield, and therefore will be adjusted to a 1981-1985 average yield, based on the ratio of the 1981- 1985 national average yield to the national 1998-2001 average yield for each oilseed. Using soybeans as an example, if a farm produced an average yield of 45 bushels/acre over the 1998-2001 period, that yield would be multiplied by 78 percent (the ratio of

national average 1981-1985 to 1998-2001 yields) to derive a direct payment yield of 35.1 bushels/acre. These calculations are performed in the “Calculated (Old) Oilseed Yields” column.

Finally, in Table 3 there are three columns that calculate yield options for counter-cyclical payments. The “Yield Option 1” column calculates old yields for crops that have an existing yield and those “new” crops that established an old yield. “Yield Option 2” calculates yields based on 70% of the increase in crop yields from those frozen in 1985 to the average yields during 1998-2001. “Yield Option 3” calculates yields by multiplying the average yields during 1998-2001 by 93.5 percent. Producers can choose either of these three yield options if they update acreage base. However, the decision made applies to all crops.

## **PRICES SHEET**

The *Prices* sheet is the input section for commodity program payment rates and commodity price projections. Commodity program prices (fixed payment rate, target price, and loan rate) are already entered. Because national commodity price projections are necessary factors in estimating projected counter-cyclical payments over the duration of the farm bill, users will have the option of choosing from three price projection series. The first series is the user’s own price projections. The second series is the price projection baseline from the Food and Agricultural Policy Research Institute (FAPRI). The third series is a futures-adjusted USDA price projection. To choose the first option, select “Producer Projected Prices (Price Series 1)” from the drop-down menu on row 18 and then manually enter the relevant prices in Table 5a. To choose the second series, select “FAPRI Projected Prices (Price Series 2)” from the drop-down menu. To choose the third series, “Futures-Adjusted USDA Projected Prices (Price Series 3)” from the drop-down menu.

## **CALCULATIONS SHEET**

The *Calculations* sheet calculates the average expected direct (fixed) and counter-cyclical payments based on inputs supplied by the user in the *Acreage*, *Yields*, and *Prices* sheets. The only required input from the user is in Table 6. This table shows the tenant’s crop share percentage for the farm and the average expected direct and counter-cyclical payments per acre for the commodity program commodities. In column C, users need to enter the percentage of gross crop returns that the tenant receives from any crop share rental arrangement on this farm. If the farm is cash rented or owner-operated, 100% should be entered in the relevant cells. This function will give producers a more accurate estimate of their total fixed and counter-cyclical payments over the life of the Farm Bill. Average expected payments per acre may be useful in deciding whether to exchange existing crop base acres for oilseed acres while keeping the old acreage base.

Table 7 shows the calculated fixed payments under the existing acreage base plus oilseeds and the fixed payments under the updated (new) acreage base. Table 8 shows the yearly estimated counter-cyclical payment rates for each of the selected program crops. Table 9 shows the estimated yearly counter-

cyclical payments based on the existing acreage base and yields. Table 10 shows the estimated yearly counter-cyclical payments based on the updated acreage base but with existing (old) yields. Table 11 shows the estimated yearly counter-cyclical payments based on the updated acreage base and partially updated yields based on yield option 2 (70% Rule). Table 12 shows the estimated yearly counter-cyclical payments based on the updated acreage base and partially updated yields with yield option 3 (93.5% Rule).

## **SUMMARY SHEET**

The *Summary* sheet condenses the average direct (fixed) and counter-cyclical payments for each of the four major base alternatives from the *Calculations* sheet. In addition to comparing these payments side-by-side, the summary page also shows the average fixed and counter-cyclical payments in three other scenarios. These scenarios include expected payments with a 10% decrease in all commodity prices, expected payments with a 10% increase in all commodity prices, and expected payments if all crop prices are at or below the loan rate (i.e. counter-cyclical payments are maximized). The *Summary* sheet also provides a comparison of the *KSU Farm Bill Spreadsheet* and FSA acreage base options.

## **KANSAS AVERAGE YIELDS SHEET**

This sheet is a reference for users to look up the average county yields for specific crops. Although this sheet may be useful in some circumstances, it is not needed to complete the spreadsheet. The county yield “plugs” in the *Yields* sheet are automatically calculated from this data, so it is not necessary to manually enter the yields from this sheet. The average county yields presented on this page come from the National Agricultural Statistics Service (NASS) of USDA.

## **OTHER HELPFUL HINTS**

### **Downloading and Saving Spreadsheet**

The *KSU Farm Bill* spreadsheet on the internet is not a stand-alone program, meaning that a user must have a recent version of Microsoft Excel on their personal computer. In addition, the user must download the spreadsheet to their computer to use it. They can save the file and then open it up on any computer with Microsoft Excel. On most computers, when they click on the spreadsheet, they will be prompted to save it or open it up automatically in Excel when they download it. In either case once the user enters data in the spreadsheet, they must then save the spreadsheet to their computer to preserve any work.

To save the file to a computer, click on “File”, then click on “Save As”. After this, select the folder the file is to be saved to and then name the file. If a producer uses the spreadsheet, entering or changing data, and then tries to exist the program, the computer will ask whether the user wants to save the changes made to the original copy. If the user wants to save the changes, click on “Yes”, select the file

to save the spreadsheet to, and name the spreadsheet. If the user does not want to save the file, click on “No”.

### **Enabling Macros**

The *KSU Farm Bill* spreadsheet contains “macros”, or simplified commands that allow users to perform various operations by clicking on a button. When the spreadsheet is opened, the computer will show a message asking if a users wants to enable macros. Select “Yes”, to enable macros. The spreadsheet is from a reliable source, and the macros do not contain viruses.

### **Cell Comments**

As previously mentioned, this spreadsheet has comments, or instructions embedded in cells that have red diamonds in the upper right corner. If these diamonds do not appear in the spreadsheet, it may be necessary to adjust the settings of Excel. To do this, click on “Tools”, then select “Options”, then select “View”. While in the “View” menu, select the comment option that says “Comment indicator only”.