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Are the Farm Bill Computer Models Always Right?[1]

Reasons a farmer may not want to follow model results precisely include:

a) If the 2014 ARC-CO wheat payment is at a maximum for one's county and no PLC on wheat. So these wheat farmers will need to turn down cash this year, betting the PLC payment will be larger in the last 4 years of the program, based on a computer model's forecasted prices. If the forecasted prices used in the computer analysis are low enough, then the PLC will generate a larger 5 year total payment than ARC-CO, in spite of no PLC payment in the first year. Based on past history it is also expected, should the Farm Bill be extended beyond 5 years, farmers will be allowed to re-select their commodity program.

b) If the farm's 2015 wheat crop is hedged, forward contracted, minimum price contracted, has a hedge to arrive contract, etc., then there is little down-side price risk. Some farmers may have hedged some of their 2016 crop too. Corn futures trade out about 3 years.

c) Many winter wheat farmers expect an increase in their future wheat APH, because of Yield Exclusion (YE) by eliminating the drought-damaged 2014 yield from their APH crop insurance history on the 2016 APH. If they have high levels of crop insurance, then wheat farmers are not really exposed to a major disaster

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until 2017 and 2018, assuming they picked the “wrong” FSA commodity program. And that may not even be the case unless the market sets the crop insurance wheat price below $5 in the last two years of the Farm Bill.

d) Payments are only on 85% of the base acres, meaning 15% of the acres will receive no payments. Most farmers will find that these expected payments are likely less than 10% of their gross revenue, and more likely closer to 5% of their gross. What really matters is the five-year difference in the payments between the two programs, because low prices will likely trigger both programs. So the marginal difference in payments will likely be less than 5% of their gross revenue, (we have estimated it may be as little as 2% of gross revenue for corn). **<u>It is just important to pick one of these programs and do it soon, so the government doesn’t pick your program.</u>** But even if, with the benefit of hindsight, you picked the “wrong” program, it is unlikely the “error” will cost you your farm, because you have crop insurance and other tools to help too.

   The model estimates are based on forecasted prices, therefore, assuming a different price forecast will generate different results. Flipping coins, splitting the selection between crops, etc. have all been suggested to me. If one were to split the crops, the sorghum has the best chance of paying under PLC and soybeans the worst. Therefore, put sorghum in PLC and the soybeans in ARC-CO, if splitting your crop choice is your plan. Corn and wheat will depend on the farm’s FSA cc yield and the county average yield (it is an Olympic average so if there have been two crop failures in the last 5 years, then the county “average” yield will be low; increasing the odds of a “high” county yield eliminating the ARC-CO payment in future years). A higher farm cc yield will make the PLC more attractive, but it still requires a price below the reference price and as result there will be no wheat PLC payment on the 2014 crop, and likely no PLC payment on 2014 soybeans either. It is too early to say on corn and sorghum, but sorghum has the best chance of a PLC payment.

e) Some farmers with multiple FSA Farm Serial numbers plan to split their crop by commodity programs. For example they plan to put some wheat farm serial numbers in PLC and others in ARC-CO for wheat. When splitting a crop across farm serial numbers one would want to pick the farms with the largest FSA cc yields for the PLC program.

f) Farmers who have crop acres with no base will have an even larger share of their crop acres receiving no payments. Therefore the government payments will provide an even smaller percentage of the farm’s gross revenue.

g) Large farmers who will hit the $125,000 payment limit when the ARC-CO payment hits the 10% stop loss will likely gain nothing from the PLC, and are likely to take the 2014 ARC-CO payment, if there is one for their county(ies). This means a smaller percentage of the acres will receive payments and government payments will provide an even smaller percentage of the farm's gross revenue.

h) Some "experts" have suggested farmers should select PLC that covers low prices and drop their crop insurance revenue coverage and insure with the lower cost Yield Protection (YP). That is because everyone has forgotten the hole in the Deficiency Payment program (PLC is just an updated DP program with higher target prices). In major drought years like 1996 and 1989, Kansas wheat farmers had no yield to sell and because of higher prices they lost their government DP payment right when they needed it the most. The only crop insurance program at that time was MPCI (renamed YP by RMA) that paid at a fixed price. Farmers made this point to Senator Bob Dole that because they lost the DP and their crop, that crop insurance did not cover the risk. Senator Dole was successful getting an Ad Hoc disaster program in 1989, but most people doubt that the current Congress would ever pass an Ad Hoc disaster program.

   As I listened to farmers following the 1989 drought, I was convinced they were right on the MPCI policy and that started the development of the harvest price option with the private sector (It has been renamed from its original name of MVP by RMA). The MVP was released in 1990 and later folded into CRC (renamed RP by RMA). The development of both products was led by Rick Gibson and his private insurance team for approval by RMA, over everyone's objection. It required the help of Senator Pat Roberts (R-KS) and former Senator Bob Kerrey (D-NE) to push the CRC coverage through the Washington bureaucracy.

   What the MVP did was cover the crop and the DP payment. Today, RP will cover the crop and the PLC payment, in the event of a short crop and high prices. If anything, PLC participants might want to consider increasing their RP coverage. While RP has been used to cover forward pricing, feed supply, etc. famers need to recognize the hole in the PLC safety net too. I should point out that in the case of a short crop and high prices is one case where ARC is likely to pay and PLC will not pay. This is the reason for 2014 ARC wheat payments in counties with a yield loss, but no ARC payment in counties (could be farm level) with no yield loss, and PLC will not pay because of "high" prices.

   Farmers who select PLC and then replace their RP coverage with YP coverage will have the same hole in the safety net as farmers did in 1989. However, I would expect no help from the government in the form of an Ad Hoc disaster program to cover the PLC safety net hole, should it happen.

i) Some of the computer models are using a price forecast that is based on an unknown price distribution that will generate some "very low" price draws, and may overstate the likelihood that PLC will pay more than ARC-CO.

j) Highly insured farmers who select ARC-CO will likely not feel bad about their decision, unless the National Average MYA wheat price falls to about $4, and that means $3.50 to $3.80 cash wheat prices in Kansas. Many farmers have 80% RP at the enterprise unit level and will pay about the same premium as 70% RP with optional units. That 80% level of coverage will increase the price protection and help reduce the risk of an extreme price loss that is not covered by ARC-CO because of the 10% stop loss. Farmers have already collected crop insurance on the 2014 crop for any loss and FSA will not pay any payment due on the 2014 crop until after October 1, 2015, almost a year and a half after the winter wheat harvest. If the 2015 wheat crop is insured at a high level based on a $6.30 price, then wheat farmers don't really have any chance of an extreme loss until the 2016 crop or perhaps the 2017 crop.

k) Most wheat farmers will need a MYA price near $4 before the PLC payments will double the ARC-CO payments, causing them to feel really bad about their decision to select ARC-CO. In Kansas, that means cash wheat prices at about $3.50 to $3.80. With prices that low, ARC-CO is likely to pay too, so the difference in the payment is likely to be about $20 to $25 per payment acre, if prices really fall. This difference will vary based on the farm's FSA cc yield. Farms with higher cc yields will benefit more from PLC, but to be clear, there will be no 2014 wheat PLC payment, and no ARC-CO payments in some counties because the county yield is above the 5-year Olympic average county yield.

l) While most of these bullet points have suggested PLC would pay more, I should make it clear I am using the statement; "if" certain things happen. In many counties, the question is: "Should I take the 2014 ARC-CO payment or turn down the cash expecting the payment may be larger under PLC in futures years because of very low prices?" It is a price forecast decision. This author has no clue if wheat price will average $4 for the year, but that is your bet if you select PLC.

It is clearly possible that over the life of the Farm Bill, ARC-CO will pay more than PLC on your farm. The only thing we know for a fact is there are some counties with a payment, some counties with no payment, on others a possible payment on the 2014 crop. After 2014, it will depend on what prices do.

The first step is for farmers to find out if there is a 2014 payment in their counties. The KSU *"2014 Payment Calculator and 2015 PLC/ARC-CO Tradeoff payment"* calculator will estimate the 2014 payment for all counties in the USA that have a published 2014 NASS yield. If the payment is deep in the money, then any remaining forecasting errors will have no impact on the result and that generated result will be the final payment per payment acre. Because it is not a complicated program, it should run on most Excel programs, but you will need to allow macros in Excel, because your security settings will likely keep it from running. Be sure and replace the FSA cc yield for PLC, which is set at the average, to your farm's cc yield. The link to download the model is at:
http://www.agmanager.info/policy/commodity/2012/ARC-2014_Tradeoff-PLC-ARC-2015.xlsx