2019 CROP INSURANCE DECISIONS

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During the next few weeks, many farm operators will be finalizing their crop insurance decisions for the 2019 crop year. **March 15th is the deadline to purchase crop insurance for the 2019 crop year.** Profit margins for crop production this year remain very tight, which makes the 2019 crop insurance decisions even more critical. Producers have several crop insurance policy options to choose from, including yield protection (YP) policies and revenue protection (RP and RPE) policies, as well as several other group insurance policy options. There are also decisions with using "enterprise units" versus "optional units", and whether or not to take advantage of the "trend adjusted" APH yields for 2019.

Yield Protection (YP) Insurance Policies:

- YP policies provide protection from yield losses only.
- The **price guarantee for YP policies for corn** is the average settlement price for December CBOT corn futures in February, and for **soybeans** is the average price for November soybean futures in February.
- Producers may select coverage ranging from 50% to 85 % of the *"actual production history"* (APH) or "proven yield" to arrive at a yield guarantee.
  Soybean Example ---- 55 Bu./ Acre APH x 85% (.85) = 46.75 Bu./ Acre guarantee
- Replant and prevented planting coverage apply to YP policies.
- Indemnity payments are calculated by subtracting the harvest yield on a "farm unit" from the yield guarantee and multiplying times the YP market price minus the crop insurance premium.
  Soybean Example --- 55 bu./A. APH; 46.75 bu./A. guarantee and 40.0 bu./A. harvest yield
  (46.75 bu./A. - 40.0 bu./A.) = 6.75 bu./A. x $9.50/Bu = $64.13/A. - $8.00/A. premium = $56.13/Acre

Revenue Protection (RP & RPE) Insurance Policies:

- The revenue protection (RP) and revenue protection with harvest price exclusion (RPE) insurance policies function essentially in the same manner, except that the guarantees on RPE policies are not affected by harvest prices that exceed the base price. Most corn and soybean producers utilize RP policies; however, in many years the RPE policies can offer good protection at a lower premium cost.
- The yield guarantee (APH), "farm unit" determinations, insurance coverage selections (50% to 85%), replant, and prevented planting coverage, etc. for RP and RPE policies are the same as for YP policies.
- All RP and RPE prices are based on Chicago Board of Trade (CBOT) Futures prices, and not cash prices.
- The higher of the Base Price or the Harvest Price is used to calculate revenue guarantee per acre for RP policies, and the Harvest Price is used to determine the harvested crop value for RP and RPE policies.
- For 2019, most Midwest corn and soybean producers will have the opportunity to utilize Trend-Adjusted APH (TA-APH) yield endorsement, which has proven to be quite favorable.

Following are details for RP and RPE price calculations for corn and soybeans:

CORN

Base Price for RP and RPE policies is the average settlement price for December CBOT corn futures during the month of February.

Harvest Price for RP and RPE policies is the average settlement price for December CBOT corn futures in October during the year of harvest, which may be used to set the guarantee for RP polies, but not RPE policies.

Limit --- The Harvest Price maximum guarantee for RP is limited to the Base Price times 200 percent.
(Example --- $4.00/bushel Base Price x 2.00 = $8.00/bushel maximum)
There are no restrictions regarding downside price movement.

SOYBEANS

Base Price for RP and RPE policies is the average settlement price for November soybean futures during the month of February.

Harvest Price for RP and RPE policies is the average settlement price for November CBOT soybean futures in October during the year of harvest, which may be used to set the guarantee for RP polies, but for RPE.

Limit --- The Harvest Price maximum guarantee for RP is limited to the Base Price times 200 percent.
(Example --- $9.50/bushel Base Price x 2.00 = $19.00/bushel maximum)
There are no restrictions regarding downside price movement.

- **2019 YP, RP and RPE Crop Insurance Base Prices will be finalized on March 1, 2019. As of February 1, 2019, the Base Prices are estimated to be at:**

  Corn ---------- $4.02 per bushel
  Soybeans -------- $9.57 per bushel

Comparing the results of similar RP to RPE crop insurance policies:

- **Soybean Loss Example #1 (Harvest Price lower than Base Price):**
  85% RP or RPE Insurance Policy (enterprise units) :
  (55 Bu./A. APH; 48 Bu./A. Harvest Yield; $9.50/Bu. CBOT Base Price;
  $8.00/Bu. CBOT Harvest Price; Premiums = $14.00/A. RP or $10.00/A. RPE
  Revenue Guarantee = 55 Bu./A. x $9.50/ Bu. x .85 = **$444.13/Acre**
  Harvested Crop Value = 45 Bu./A. x $ 8.50/ Bu. = **$382.50/Acre**
  Indemnity Payment = $444.13/A. - $382.50/A. = $61.63/A. - $14.00/A. = **$47.63/Acre (RP)**
  $444.13/A.- $382.50/A. = $61.63/A. - $10.00/A. = **$51.63/Acre (RPE)**

  NOTE --- If the coverage level in the previous example is decreased to 75%, the revenue guarantee is decreased to $391.88. Assuming a harvested crop value of $382.50 per acre, and a premium cost of $5.00 per acre for RP and $3.00 per acre for RPE, **the resulting indemnity payments would be only $4.38 per acre for RP and $6.38 per acre for RPE.**

- **Soybean Loss Example #2 (Harvest Price higher than Base Price):**
  85% RP or RPE Insurance Policy (enterprise units) :
  (55 Bu./A. APH; 40 Bu./A. Harvest Yield; $9.50/Bu. CBOT Base Price;
  $12.00/Bu. CBOT Harvest Price; Premiums = $14.00/A RP or $10.00/A. RPE
  RP Revenue Guarantee = 55 Bu./A. x $12.00/ Bu. x .85 = **$561.00/ Acre**
  RPE Revenue Guarantee = 55 Bu./A. x $9.50/ Bu. x .85 = **$444.13/ Acre**
  Harvested Crop Value = 40 Bu./A. x $ 12.00/ Bu. = **$480.00/ Acre**
  Indemnity Payment = $561.00/A . - $480.00/A. = $81.00/A. - $14.00/A. = **$67.00/Acre (RP)**
  $444.13/A. - $480.00/A. = ($35.87) - $10.00/A. = **Zero (RPE)**

  NOTE --- The scenario in Example #2 really comes into play in a year of a major drought, such as in 2012, or national yield reduction from another cause, which results in a sharp increase in grain prices during the growing season. This situation occurred in in 2012, and to a lesser degree in 2016. This resulted in a wide discrepancy in crop insurance indemnity payments between RP and RPE policies, and has resulted in most producers not choosing RPE policies in recent years. Since 2012, in most locations that received crop insurance indemnity payments, RPE payments have equaled or exceeded RP payments at comparable insurance coverage levels (% coverage, units, TA yields, etc.)
  The question producers should ask is: *"Are you willing to take on the risk of a situation similar to the 2012 drought, just to save a few $$$ in premium cost ?"*

Historical Harvest Prices for Corn and Soybeans:

An analysis of the past twelve years (2007-2018) shows that the final crop insurance harvest price for corn has been lower than the Spring base price in nine of the twelve years (75%), including the past six years (2013-2018). The only years with an increase in the corn harvest price were 2010, 2011 and 2012. The range has been from an increase in the harvest price of +$1.82 per bushel in 2012 to a decline of ($1.27) per bushel in 2008 and ($1.26) per bushel in 2013. For soybeans, the harvest price has increased in five years (2007,2009, 2010, 2012 and 2016), decreased in six years (2008, 2011, 2014, 2015, 2017 and 2018) and stayed the same in 2013. The range has been from an increase in the soybean harvest price of +$2.84 per bushel in 2012 to a decline of ($3.00) per bushel in 2008.

Decision between *"Enterprise Units"* and *"Optional Units"*:

"Enterprise units" combine all acres of a crop in a given county into one crop insurance unit, while *"optional units"* allow producers to insure crops separately in each individual township section. "Enterprise units" usually have considerably lower premium costs (approx. $4.00-$7.00 per acre) compared to "optional units", for comparable RP and RPE policies. Producers should be aware that "enterprise units" are based on larger coverage areas, and do not necessarily cover losses from isolated storms or crop damage that affect individual farm units, such as damage from hail, wind, or heavy rains. So additional insurance, such as hail or wind insurance, may be required to insure against these types of losses. It is also important for producers to run "what if" scenarios when analyzing the comparison between "enterprise units" and "optional units".

Many times, producers automatically opt for "enterprise units" every year, due to the lower premium cost per acre for similar coverage, and probably not totally understanding the differences in coverage between "enterprise units" and "optional units". It is important to analyze the yield risk on each individual farm unit, when determining if paying the extra premium for insurance coverage with "optional units" makes sense. If a producer has uniform soil types and drainage, in a close geographical area, and is primarily concerned with a price decline, a RP or RPE policy with "enterprise units" is probably a good option. However, if a producer has farm units that are more spread out geographically, with more variation in soil types and drainage, and has greater concerns with yield variability, they may want to consider a RP policy with "optional units".

Key Items to consider with 2019 Crop Insurance Decisions:

- **Crop Insurance premiums for 2019 should be similar or slightly lower than 2018.**
  2019 Crop Insurance premiums for most coverage levels of corn and soybeans in the Midwest should be similar to comparable 2018 premium levels, due to similar base price levels for both crops in 2019 (based on early Feb. estimates), and a relatively low volatility level compared to recent years.

- **There are a wide variety of crop insurance policies and coverage levels available.**
  Make sure you are comparing "apples to apples" when comparing crop insurance premium costs for various options or types of crop insurance policies, as well as recognizing the limitations and the differences of the various crop insurance products.

- **Use caution in moving forward with Area Risk Protection (ARP) crop insurance plans.**
  Some insurance companies and analysts have been promoting the ARP crop insurance option for 2019, due to the ability to purchase up to the 90 percent coverage level, using the same price structure as RP policies. However, be aware that ARP policies use county-level yields for APH yield guarantees and final harvest yields, whereas RP policies utilize the farm APH yields to calculate the initial insurance guarantee. There is also no yield protection against isolated yield losses on individual farm units with APH policies. APH works best if your primary risk management concern is price protection, but not as well if you are also concerned with yield risk. In many cases, premium levels for a 90% ARP policy are as high or higher, compared to a standard 85% RP policy with "enterprise units".

- **View crop insurance decisions from a risk management perspective.**
  Given the tight profit margins for crop production in 2019, some producers may have a tendency to reduce their crop insurance coverage, in order to save a few dollars per acre. However, a producer must first decide: ***"How much financial risk can I handle if there are greatly reduced crop yields due to potential weather problems in 2019, and/or lower than expected crop prices ?"*** RP crop insurance policies serve as an excellent risk management tool for these situations, and 2019 may not be a good year to reduce insurance coverage, given the current uncertainty surrounding crop prices.

- **Take a good look at the 85% coverage levels, especially when using *"enterprise units"* with RP insurance policies.**
  Many Midwest corn and soybean producers have been utilizing a minimum of 80 % RP coverage with *"enterprise units"* in recent years. 2019 may be the time to consider upgrading to the 85% coverage level, especially for soybeans. In many cases, the 85% coverage level offers considerably more protection, with a modest increase in premium costs. Many producers will be able to guarantee near $550.00 to $700.00 per acre for corn, and near $350.00 to $475.00 per acre for soybeans, at the 85% coverage level for 2019, particularly when utilizing trend-adjusted APH yields.

- **Compare the insurance coverage and premium costs of RP and RPE insurance policies.**
  Remember, if the "harvest price" (average CBOT price in Oct.) for corn or soybeans is lower than the "base price" (average CBOT price in Feb.), the RP and RPE payment calculations function similarly, and RPE premium costs are slightly less than RP premiums at similar coverage levels. **Remember, there is considerable added risk in utilizing a RPE policy when the final "harvest price" exceeds the "base price", and your farm unit(s) have a yield loss that exceeds the insurance coverage level.**

- **In most instances, utilize the Trend Adjusted (TA)-APH endorsement for 2019.**
  Many producers in the Upper Midwest have been able to significantly enhance their insurance protection in recent years by utilizing the TA-APH option, with only slightly higher premium costs. Using the TA-APH endorsement is a very good crop insurance strategy for most eligible corn, soybeans, and wheat producers.

- **Consider using the APH Yield Exclusion (YE), where available** --- The YE option allows specific years with low production to be dropped from crop insurance APH yield guarantee calculations. Several counties in Central and Northern Minnesota are eligible for YE for corn and soybeans in some of the past ten years. Most counties in Southern and Western Minnesota, except for the Red River Valley, are not eligible for the YE exclusion for corn and soybeans. For information on which counties, crops, and years are eligible for YE, go the RMA web site at: **http://www.rma.usda.gov/**

- **Where to get more information on 2019 crop insurance alternatives.**
  A reputable crop insurance agent is the best source of information to find out more details of the various coverage plans, to learn more about the TA-APH yield endorsement, to get premium quotes, and to receive assistance with finalizing 2019 crop insurance decisions.

- **Following are some very good web sites with crop insurance information:**
  > University of Illinois FarmDoc : **http://www.farmdoc.illinois.edu/cropins/index.asp**
  > USDA Risk Management Agency (RMA) : **http://www.rma.usda.gov/**

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Note --- For additional information contact Kent Thiesse, Farm Management Analyst and Vice President, MinnStar Bank, Lake Crystal, MN. (Phone --- (507) 381-7960);
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Table A ----- Comparison of YP and RP for Corn

Assumptions - - - • APH - 190 Bu./Acre
• 85% YP Bu. Guarantee - - - - - - - - - 161.50 Bu./ Acre
• YP Market Price - - - - - - - - - - - - - - $ 4.00/Bu. (CBOT Dec. Futures)
• RP/RPE Base Price - - - - - - - - - - - - $ 4.00/Bu. (CBOT Dec. Futures)
• 85% RP Minimum Guarantee - - - - - $ 646.00 per acre

Insurance Type	**Est. Actual 2019 Production (Bu./Acre)**				
	205	190	175	160	145
	— Est. Insurance Indemnity Payment Per Acre — (Before Premium Deductions)				
YP (85%)	0	0	0	$ 6.00	$ 66.00
RP (85%) (CBOT Harvest Price/Bu.)					
$ 4.50	0	0	0	0	0
$ 4.25	0	0	0	0	$ 29.75
$ 4.00	0	0	0	$ 6.00	$ 66.00
$ 3.75	0	0	0	$ 46.00	$102.25
$ 3.50	0	0	$ 33.50	$ 86.00	$138.50
$ 3.25	0	$ 28.50	$ 77.25	$126.00	$174.75

Table B ----- Comparison of YP and RP for Soybeans

Assumptions - - - • APH - 55.0 Bu./Acre
• 85% YP Bu. Guarantee - - - - - - - - - 46.75 Bu./ Acre
• YP Market Price - - - - - - - - - - - - - - $9.50/Bu. (CBOT Nov. Futures)
• RP/RPE Base Price - - - - - - - - - - - - $9.50/Bu. (CBOT Nov. Futures)
• 85% RP Minimum Guarantee - - - - - $444.13 per Acre

Insurance Type	**Est. Actual 2019 Production (Bu./Acre)**				
	55	50	45	40	35
	— Est. Insurance Indemnity Payment Per Acre — (Before Premium Deductions)				
YP (85%)	0	0	$ 16.63	$ 64.13	$111.63
RP (85%) (CBOT Harvest Price/Bu.)					
$10.50	0	0	0	$ 24.13	$ 76.63
$10.00	0	0	0	$ 44.13	$ 94.13
$ 9.50	0	0	$ 16.63	$ 64.13	$111.63
$ 9.00	0	0	$ 39.13	$ 84.13	$129.13
$ 8.50	0	$ 19.13	$ 61.63	$104.13	$146.63
$ 8.00	$ 4.13	$ 44.13	$ 84.13	$124.13	$164.13

NOTE : The preceding Crop Insurance Tables were developed by Kent Thiesse, Farm Management Analyst, and the Tables are for example only. Actual crop insurance calculations will vary depending on crop, location, APH yield, endorsements, etc.