NC COOPERATIVE EXTENSION   N.C. A&T   NC STATE   **COLLEGE OF AGRICULTURE & LIFE SCIENCES**

Agricultural Policy and Risk Management Brief

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Do you want to get an estimate of your crop insurance premium cost?
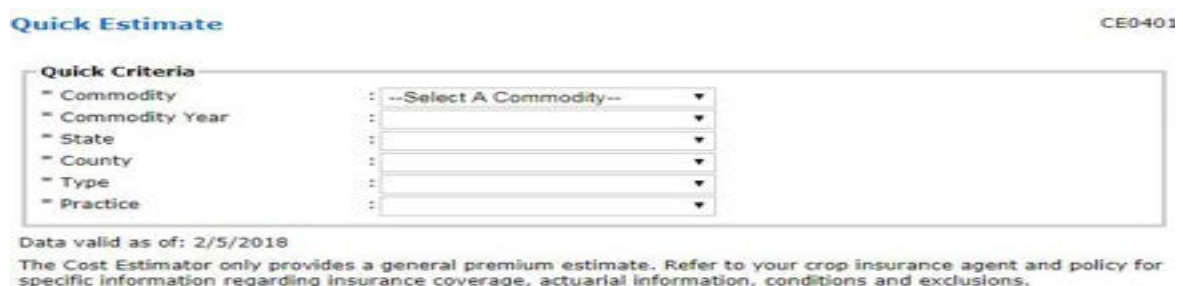**A guide for using the "Quick Estimate" RMA online tool**
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It is that time of the year in North Carolina (NC) where a number of our field crop producers purchase crop insurance to serve as their main risk management tool for their operation. Typically, producers simply call their crop insurance agent to get a premium quote for the upcoming season. But it is important to note that there are on-line crop insurance premium cost calculators that farmers can use to get a "quick and dirty" estimate of their likely premium costs. Specifically, the Risk Management Agency (RMA) has their own "Quick Estimate" Cost Estimator that can provide farmers a general estimate of the amount of premiums that they are likely to pay in the upcoming year. It must be emphasized here, however, that the on-line "Quick Estimate" is just an initial premium benchmark that farmers can use. They should still contact and work with their insurance agent to get the exact (and more precise) quote.

The purpose of this brief is to provide a guide on how to use the on-line "Quick Estimate" RMA Cost Estimator to get an initial premium quote. The "Quick Estimate" RMA Cost Estimator can be found at:[1]

https://ewebapp.rma.usda.gov/apps/CostEstimator/Estimates/QuickEstimate.aspx

Pop-up blockers in the web browser should be turned off prior to using the "Quick Estimate" on-line tool. The "Quick Criteria" block would be the first thing that one would see when opening the link above, and it looks as follows:

The drop-down arrow in the "Commodity" line would allow you to pick the commodity you wish to insure (and get a quote for). Once the "Commodity" line is filled, several other blocks appear where the producer needs to provide further information.[2] Once the "Commodity" line is filled, all other lines in the first block is

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[1] Note that there is another "Detailed Estimate" RMA Cost Estimator that is not considered in this document. The "Quick Estimate" tool uses a crop/commodity as the starting point and then all applicable insurance plans are listed. On the other hand, the "Detailed Estimate" tool uses the insurance plan as the starting point and then all applicable crops are displayed based on the user's selected state and county.
[2] Note that "pop-ups" will also typically appear at this point to ask if the farmer participates in Agriculture Risk Coverage (ARC) for the crop of interest. Depending on your response, this just tells the tool whether one is eligible for the Supplemental Coverage Option (SCO) plan, so that the tool can also generate SCO quotes. For this guide, we simply say we do not participate and ignore the SCO quotes. Other pop-ups to inform the user about whether the Projected Price used in the insurance has been finalized. Previous year's projected prices can be used if no current projected price has been finalized.

pre-filled with the default information and one can just fill in the appropriate information (e.g., filling in the correct year, location, crop type, and practice). As an example, we filled in the necessary information using a non-irrigated soybean operation in Wake County, NC for 2018:

After the "Quick Criteria" block has been filled, the "Individual Coverage" block is the next area of the tool that needs to be filled (where there are also three sub-blocks corresponding to the most common individual-based crop insurance plans – Yield Protection (YP), Revenue Protection (RP), and Revenue Protection with Harvest Price Exclusion (RP-HPE)):

Information about the crop acreage and insured share percent is to be provided in this block. In our example, if the farmer fully owns all the soybean acres to be planted (i.e., 100% share), then the farmer just puts in the acreage to be planted in the Reported Acreage line and put 1.0 in the Insured Share Percent line. In our example, we assume that our soybean farmer has 1 acre (i.e., to get a per acre premium estimate) and the insured share percent is 1.0.

The next set of information being asked is for the "Approved Yield" and the "Projected Yield." The Approved Yield is simply the "average" yield of the crop to be insured based on actual production history (APH) over at least the last four years. This is typically used to establish the Production Guarantee for which the insured amount (or liability is based). In the official Approved Yield calculation of RMA, this Approved Yield may include "assigned" yields that substitute for actual yields (or yields may be trend adjusted) due to regulatory provisions in the crop insurance plans that allow for this practice. Given this flexibility with the Approved Yield, the Rate Yield is the average yield of the crop to be insured without including any of these "assigned" yields (i.e., the rate yield is computed based only on the average of actual yields). As such, the Rate Yields is the yield upon which the premium rate is based. For the purpose of simply getting a rough premium estimate, the Approved Yield and Rate Yield can just be assumed to be the same. For illustration, we assume that the Approved Yield and Rate Yield of our soybean farmer in Wake County, NC are equal and it is 35 bu/acre.

The next three sub-blocks in this area of the tool then asks about the Projected Price and Price Volatility Factor to be used in the premium rate calculation for the YP, RP, and RP-HPE insurance plans. The Projected

Price and Price Volatility Factor is typically based on a Price Discovery mechanism that RMA uses to determine the value of the crop to be insured. The Price Discovery is based on futures contract prices over some period (i.e., the price behavior of next January's soybean futures contract over the period Jan 15 to Feb 14 of the current year) and are finalized after this period is over. If the Projected Price and Price Volatility Factor are not yet finalized, the information about last year's price and volatility measure are presented in the estimator (as seen in the previous illustration). If these things have been finalized, then the finalized Projected Price and Price Volatility Factors are shown. To continue our illustration based on the example soybean farmer, we simply use last year's estimates as given in the on-line tool: $10.25/bu Projected Price and 0.16 Price Volatility Factor.[3]

The filled-in blocks in our example will look like the following:

Once all the information above are plugged-in at this point, a premium estimate can already be generated for the YP, RP, and RP-HPE insurance plans. Note that there may be several other blocks that can be filled after the "Individual Coverage" block (i.e., the blocks for getting SCO premium estimates and/or "Area Coverage" for area-based insurance plans (like the Area Risk Protection Insurance (ARPI)), but for our purposes here we ignore these and assume that the soybean farmer is only interested in getting quick premium estimates for the YP, RP, and RP-HPE insurance plans.[4]

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[3] One can also take a look at the Price Discovery tool in the RMA website to get the "current day" estimate of the Projected Price and Price Volatility Factor, and these estimates can be used to get the premium estimate. In our case, at the time of writing, the Projected Price for soybeans in NC was $10.08 and the Price Volatility Factor was 0.13 (which is lower than the previous year estimates above).

[4] In some instances, the tool would not run without filling in the "Area Coverage" block. In this case, simply use the data from the "Individual Coverage" block to fill-in the required spaces (i.e., fill in the reported acreage, insured share percent, projected price, etc. using the previously entered values).

At this point the "Get Estimates" button at the bottom of the page can then be clicked for the tool to calculate the YP, RP, and RP-HPE premium estimates. Note that it may take a couple of minutes for the tool to make the necessary calculations and informational pop-ups may also appear.

After the results page is generated, there would be a number of blocks at the top part showing the values we entered above. However, the pertinent results are at the bottom of the results page and looks like the following:

Show In Grid

| ◉ Liability Amount | ○ Total Premium Amount | ○ Producer Premium Amount | ○ Subsidy Amount | ○ Loss Trigger Point |

Liability Amount

Individual Coverage

	PE %	85 %	80 %	75 %	70 %	65 %	60 %	55 %	50 %	View					
Yield Protection 01	100 %	$305.00	$287.00	$270.00	$251.00	$234.00	$215.00	$198.00	$179.00	Worksheets	Detailed Estimate	CEPP	SPOI	AIB	SCO Estimate
Revenue Protection 02	100 %	$305.00	$287.00	$270.00	$251.00	$234.00	$215.00	$198.00	$179.00	Worksheets	Detailed Estimate	CEPP	SPOI	AIB	SCO Estimate
Revenue Prot with Harvest Price Exclusion 03	100 %	$305.00	$287.00	$270.00	$251.00	$234.00	$215.00	$198.00	$179.00	Worksheets	Detailed Estimate	CEPP	SPOI	AIB	SCO Estimate

The top grid above indicates that "Liability Amount" results are the one initially presented (i.e., the Liability Amount circle is blacked out). The bottom grid then shows the resulting liability calculations at different coverage levels available for the YP, RP, and RP-HPE policies. In our soybean example above, the liability amount at the 75% coverage level for RP is $270/acre. Hence, the insured amount per acre for this farm is $270/acre (i.e., if the insured has a total loss this is the amount he/she will get, per acre).

The other calculation results that can be displayed are Total Premium Amount, Producer Premium Amount, Subsidy Amount, and Loss Trigger Point (i.e., by clicking the appropriate circle). The Total Premium Amount is the calculated total premium without applying the premium subsidy provided by the government. The Producer Premium Amount is simply the Total Premium Amount less the Subsidy Amount. Lastly, the Loss Trigger Amount is the yield (or production) loss that need to occur that would trigger an indemnity at a particular coverage level.

In the context of our example, where a soybean farmer in Wake County, NC is wanting to get a quick estimate of the premium he/she is likely to pay, the most important premium result would be for the Producer Premium Amount, and the results for this is as follows:

Show In Grid

| ○ Liability Amount | ○ Total Premium Amount | ◉ Producer Premium Amount | ○ Subsidy Amount | ○ Loss Trigger Point |

Producer Premium Amount

Individual Coverage

	PE %	85 %	80 %	75 %	70 %	65 %	60 %	55 %	50 %	View					
Yield Protection 01	100 %	$45.00	$34.00	$26.00	$20.00	$18.00	$13.00	$11.00	$8.00	Worksheets	Detailed Estimate	CEPP	SPOI	AIB	SCO Estimate
Revenue Protection 02	100 %	$53.00	$39.00	$30.00	$23.00	$20.00	$15.00	$13.00	$10.00	Worksheets	Detailed Estimate	CEPP	SPOI	AIB	SCO Estimate
Revenue Prot with Harvest Price Exclusion 03	100 %	$48.00	$35.00	$27.00	$21.00	$18.00	$13.00	$11.00	$9.00	Worksheets	Detailed Estimate	CEPP	SPOI	AIB	SCO Estimate

As can be seen above, the Producer Premium Amount is typically highest for the RP policy, and lowest for the YP, with RP-HPE somewhere in between (for all coverage levels). This just reflects the more comprehensive coverage of the RP policy where it covers both yield and price risk, plus the fact that it allows one to use the higher of the harvest price or projected price in the guarantee and indemnity calculations. In our example above, the Producer Premium Amount at the 75% coverage level for RP is $30/acre. In this case, one needs to pay $30/acre to get $270/acre in crop insurance revenue protection (i.e., the liability amount).

This $30/acre value would then be the "Quick Estimate" that one would be interested in so as to gauge the general level of premium one has to pay for the desired insurance coverage. Of course, in our example above, one could simply multiply this per acre amount by the total number acres he/she wants to insure to get a general idea of the overall premium amount that needs to be paid for the farm (i.e., if there are 1000 acres of soybeans then the overall premium to be paid is $30,000 for this crop). The Total Premium, Subsidy Amount, and Loss Trigger Point buttons at the top of the grid can also be clicked if the insured is interested to see the calculated amounts for these variables.

FOR MORE INFORMATION (Links):
RMA Cost Estimator Frequently Asked Questions (FAQs):
https://ewebapp.rma.usda.gov/apps/CostEstimator/Help/FAQs.aspx

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