# Risk Management Strategies Utilizing Combo Insurance Plans, Futures & Options

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http://www.montana.edu/softwaredownloads/financialmgtdownloads.html



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## Analysis Software --- Written by:

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## Case Farm Examples

#### Winter Wheat

- County dry land with crop fallow rotation
- APH yield is 50 bu. per acre
- Producer selected 75% yield coverage level
- RMA Projected Harvest Price is \$7.11 per bu.
- Premiums:
  - YP = \$23.00
  - RP-HPE = \$25.00
  - RP = \$30.00



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# Three Combo Plan Trigger Levels

- Yield Trigger Level
- RMA Projected Harvest Price
- RMA Harvest Price
- All possible Combinations of these Triggers



## Risk Management Strategies

- Combo Plans (Yield and Price)
  - YP, RP-HPE, RP
- Traditional Marketing Tools (Price Only)
  - Hedge, Puts, Calls
  - Combinations of Traditional Marketing Tools
- Combinations of <u>Insurance</u> and <u>Traditional</u> tools
  - Explore the Coverage Gaps
- Combo Plans versus Traditional Tools



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### Yield Protection (YP)

- Yield Protection plan of insurance replaces APH plan of insurance
  - For crops with Commodity Exchange price discovery
- Uses RMA Projected Harvest Price to determine insurance coverage
  - RMA average of futures prior to sales closing date
  - Futures market used and time period averaged varies by commodity and location



#### YP Guarantee for Base Case –Winter Wheat

- APH yield is 50 bushels
- Yield coverage level selected is 80%
  - Yield coverage level is 40 bushels
- RMA Projected Harvest Price is \$7.11
- Revenue Guarantee is
  - $-$7.11 \times 50$  bu.  $\times 80\% = $284.40$
- Indemnity payments received <u>only when</u> <u>yield falls below 40 bu.</u> (50 \* 80%)
- Price is locked in at \$7.11



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# Revenue Protection with Harvest Price Exclusion (RP-HPE)

- Revenue guarantee established using RMA Projected Harvest Price and producer selected yield coverage level
- Indemnity payment is triggered with <u>any</u> <u>combination</u> of yield and price below the revenue guarantee:
  - Actual yield <u>above or below</u> the yield coverage level selected <u>times</u>
  - RMA Projected Harvest Price (locked in)



#### Our Base Case for RP-HPE – Winter Wheat

- RMA Projected Harvest Price is \$7.11 for WW
- APH yield is 50 bushels
- Yield election is 80%
- Guarantee is \$7.11 x 80% x 50 = \$284.40



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### Revenue Protection (RP)

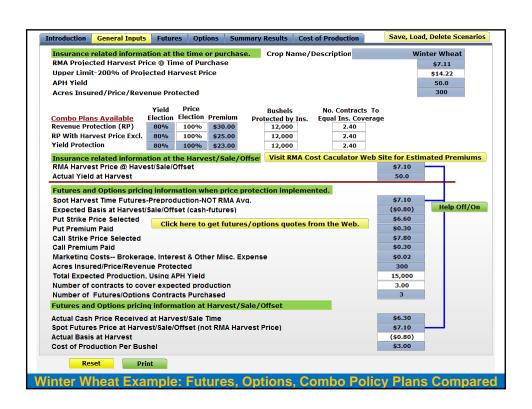
- Allows increase in the revenue guarantee if the RMA Harvest Price increase above the RMA Projected Harvest Price
  - Guarantee based on the higher these two components
- Indemnity payment triggered with <u>any</u> <u>combination</u> of price and actual yield less than the revenue guarantee
  - Price is higher of RMA Projected Harvest Price or RMA Harvest Price capped @ 200% of Projected Harvest Price
  - Yield = Actual yield



## Revenue Protection (RP) – Winter Wheat

- RP has minimum and maximum levels
  - RMA Projected Harvest Price times APH Yield times coverage level selected.
    - Established prior to sales closing date for each commodity
    - \$7.11 times 50 times 80% = **\$284.40** per acre
  - RMA Harvest Price times producers actual yield
    - Capped at 200% of the RMA Projected Harvest Price
    - \$14.22 times 50 bushels times 80% = **\$568.80** maximum per acre guarantee





## **Exploring the Software**

- A number changed <u>anywhere</u> changes that number everywhere.
- Set all *Plan* premiums to zero
- Set RMA Harvest Price <u>above</u> and <u>below</u> RMA Project Harvest Price
- Vary yields at all price levels
  - Where does RP pay above chosen yield level
- Use "Buy Up Calculator"
  - Adjust Yield coverage level selected



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Questions??



