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

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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

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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 x 50 bu. x 80% = **$284.40**
- Indemnity payments received only when yield falls below 40 bu. (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 any combination of yield and price below the revenue guarantee:
  - Actual yield above or below the yield coverage level selected **times**
  - RMA Projected Harvest Price (locked in)

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Our Base Case for RP-HPE – <u>Winter Wheat</u>

- 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 *any combination* 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

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Revenue Protection (RP) – <u>Winter Wheat</u>

- 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

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| Introduction | General Inputs | Futures | Options | Summary Results | Cost of Production | | Save, Load, Delete Scenarios |

Insurance related information at the time or purchase.	Crop Name/Description	**Winter Wheat**
RMA Projected Harvest Price @ Time of Purchase		$7.11
Upper Limit-200% of Projected Harvest Price		$14.22
APH Yield		50.0
Acres Insured/Price/Revenue Protected		300

Combo Plans Available	Yield Election	Price Election	Premium	Bushels Protected by Ins.	No. Contracts To Equal Ins. Coverage
Revenue Protection (RP)	80%	100%	$30.00	12,000	2.40
RP With Harvest Price Excl.	80%	100%	$25.00	12,000	2.40
Yield Protection	80%	100%	$23.00	12,000	2.40

Insurance related information at the Harvest/Sale/Offset — Visit RMA Cost Caculator Web Site for Estimated Premiums

RMA Harvest Price @ Havest/Sale/Offset	$7.10
Actual Yield at Harvest	50.0

Futures and Options pricing information when price protection implemented.

Spot Harvest Time Futures-Preproduction-NOT RMA Avg.	$7.10
Expected Basis at Harvest/Sale/Offset (cash-futures)	($0.80)
Put Strike Price Selected	$6.60
Put Premium Paid	$0.30
Call Strike Price Selected	$7.80
Call Premium Paid	$0.30
Marketing Costs-- Brokerage, Interest & Other Misc. Expense	$0.02
Acres Insured/Price/Revenue Protected	300
Total Expected Production, Using APH Yield	15,000
Number of contracts to cover expected production	3.00
Number of Futures/Options Contracts Purchased	3

Click here to get futures/options quotes from the Web.

Help Off/On

Futures and Options pricing information at Harvest/Sale/Offset

Actual Cash Price Received at Harvest/Sale Time	$6.30
Spot Futures Price at Harvest/Sale/Offset (not RMA Harvest Price)	$7.10
Actual Basis at Harvest	($0.80)
Cost of Production Per Bushel	$3.00

Reset   Print

Winter Wheat Example: Futures, Options, Combo Policy Plans Compared

Exploring the Software

- A number changed <u>anywhere</u> changes that number <u>everywhere</u>.
- 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??

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