

# GRIP and GRP Crop Insurance



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Group Risk Income Protection (GRIP), Group Risk Plan (GRP), and Group Risk Income Protection with Harvest Revenue Option (GRIP-HRO) are available for wheat and grain sorghum in a limited number of Kansas counties.

The simplest description of GRP is that it is a “put option” on expected county yield. The GRIP contract is a “put option” on expected county revenue. Like a price option, the grower carries the basis risk, which is the difference between the percent county yield loss and the percent farm level yield loss. Producers may reduce their basis risk by purchasing a lower deductible under GRIP/GRP and more dollars of protection to offset an expected lower variability in county yields.

GRIP/GRP provides “reasonable” protection for drought, freeze, and excess moisture. However, GRIP/GRP does not provide reasonable protection for hail, flood, prevented planting, replant, quality loss adjustment, or any other spot losses. Growers who purchase GRIP/GRP also may supplement their coverage with private hail insurance. Growers who purchase GRIP/GRP because of multiple disasters that have lowered their APH guarantees will need to maintain their production history so they have the option to switch back to an APH based contract.

**Coverage:** Coverage is set 70, 75, 80, 85, or 90 percent and 65 percent CAT (GRP only) of the expected county yield as set by RMA. The individual grower’s yield history has no impact on the coverage or indemnity payments. Indemnity payments are based only on National Agricultural Statistical Service (NASS) county yields and the grower’s individual yield is not considered in the loss calculation.

**Dollars of coverage:** RMA sets the maximum dollars of coverage that may be purchased based on expected county yields times 150 percent times RMA’s new common price that is based on futures markets’ prices. GRIP prices are the same as Revenue Protection (RP) except for GRP that is set at a lower price. The minimum coverage a grower may purchase is 60 percent of the maximum.

**Premium rates and subsidy:** The premium rates are based on historical county yields and futures prices. The subsidy rates are set at a higher level than Yield Protection, i.e. 85 percent GRIP coverage premium has a 49 percent subsidy.

**Table 1. Example GRP Calculations**

|                           |                                                                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Trigger Yield</b>      | Expected County Yield (49.1 bu.) × % Coverage (90%) = 44.2 bu.                                                                                     |
| <b>Maximum Protection</b> | GRP Price Election (\$5.90) × Expected Yield × 150% scalar = \$434.54                                                                              |
| <b>GRP Indemnity</b>      | (Trigger Yield (44.2 bu.) - Current Year County Yield (24.0 bu.) ÷ Trigger Yield (44.2 bu.) = 45.7% × selected \$ protection (\$434.54) = \$198.58 |

**Table 2. Example GRIP Calculations**

|                                |                                                                                                                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Expected County Revenue</b> | Expected County Yield (49.1 bu.) × Base Price (\$8.62) = \$423.24                                                                                                            |
| <b>Trigger Revenue</b>         | Expected County Revenue (\$423.24) × Coverage (90%) = \$380.92                                                                                                               |
| <b>Maximum Protection</b>      | Expected County Revenue (\$423.24) × Scalar (150%) = \$634.86                                                                                                                |
| <b>GRIP Payment</b>            | (Trigger Revenue (\$380.92) - Current Year County Revenue (24 bu. × \$5.00 Harvest Price) ÷ Trigger Revenue \$380.92) = 68.5% × selected \$ protection (\$634.86) = \$434.88 |

**Table 3. Example GRIP-HRO Calculations**

|                               |                                                                                                                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Harvest Revenue Option</b> | {Greater of Harvest Price (\$10.00) ÷ Base Price (\$8.62), 1.0} = 1.40                                                                                                                     |
| <b>Final County Revenue</b>   | Actual County yield (24.0 bu.) × Harvest Price (\$10.00) = \$240.00                                                                                                                        |
| <b>Trigger Revenue</b>        | Expected County yield (49.1) × Base Price (\$8.62) × Harvest Revenue Option (1.16)) × Coverage (90%) = \$441.86                                                                            |
| <b>Maximum Protection</b>     | Expected County Revenue (\$423.24) × Scalar (150%) = \$634.86                                                                                                                              |
| <b>GRIP-HRO Payment</b>       | Trigger Revenue (\$441.86) - Current Year County Revenue (24 bu. × \$10.00 Harvest Price) ÷ Trigger Revenue (\$441.86) = 45.7% × Selected \$ Protection (\$634.86) × HRO (1.16) = \$336.55 |

**Group Risk Income Protection and Group Risk Plan**  
**Analysis of Per Acre Net Cash Flow**

**Crop:** \_\_\_\_\_  
**Situation:** \_\_\_\_\_

| Insurance Contract (Central Kansas Wheat)<br>Harvest Price Scenario  | GRP       |            | GRIP      |            | GRIP-HRO  |            | Your Farm | Your Farm |
|----------------------------------------------------------------------|-----------|------------|-----------|------------|-----------|------------|-----------|-----------|
|                                                                      | Low Price | High Price | Low Price | High Price | Low Price | High Price |           |           |
| <b>Projected Crop Sales and Other Cash Inflows</b>                   |           |            |           |            |           |            |           |           |
| 1. Enter Yield per Planted Acre                                      | 10.0      | 10.0       | 10.0      | 10.0       | 10.0      | 10.0       | _____     | _____     |
| 2. Expected Market Price + LDP                                       | \$8.62    | \$8.62     | \$8.62    | \$8.62     | \$8.62    | \$8.62     | \$ _____  | \$ _____  |
| 3. Expected Sales: (Line 1 × Line 2)                                 | \$86.20   | \$86.20    | \$86.20   | \$86.20    | \$86.20   | \$86.20    | \$ _____  | \$ _____  |
| 4. Counter Cyclical or ACRE Payment                                  | \$0.00    | \$0.00     | \$0.00    | \$0.00     | \$0.00    | \$0.00     | \$ _____  | \$ _____  |
| 5. Direct FSA Payment & Other Receipts, No LDP <sup>1</sup>          | \$21.75   | \$21.75    | \$21.75   | \$21.75    | \$21.75   | \$21.75    | \$ _____  | \$ _____  |
| 6. Total Receipts: (Line 3 + Line 4 + Line 5)                        | \$107.95  | \$107.95   | \$107.95  | \$107.95   | \$107.95  | \$107.95   | \$ _____  | \$ _____  |
| <b>Maximum \$ of Coverage &amp; Premium</b>                          |           |            |           |            |           |            |           |           |
| 7. Expected County Yield                                             | 49.1      | 49.1       | 49.1      | 49.1       | 49.1      | 49.1       | _____     | _____     |
| 8. 150% Coverage Scalar                                              | 150%      | 150%       | 150%      | 150%       | 150%      | 150%       | _____ %   | _____ %   |
| 9. Price Election/Expected Price <sup>2</sup>                        | \$5.90    | \$5.90     | \$8.62    | \$8.62     | \$8.62    | \$8.62     | \$ _____  | \$ _____  |
| 10. Maximum Dollars of Coverage (Line 7 × Line 8 × Line 9)           | \$434.54  | \$434.54   | \$634.86  | \$634.86   | \$634.86  | \$634.86   | \$ _____  | \$ _____  |
| 11. Farmer Premium Rate <sup>3</sup>                                 | 2.27%     | 2.27%      | 5.53%     | 5.53%      | 6.22%     | 6.22%      | \$ _____  | \$ _____  |
| 12. Premium (Farmer Paid) <sup>3</sup>                               | \$9.86    | \$9.86     | \$35.12   | \$35.12    | \$39.47   | \$39.47    | \$ _____  | \$ _____  |
| <b>Projected Crop Cash Requirements</b>                              |           |            |           |            |           |            |           |           |
| 13. Enter Preharvest Cash Operating Expense <sup>4</sup>             | \$173.73  | \$173.73   | \$173.73  | \$173.73   | \$173.73  | \$173.73   | \$ _____  | \$ _____  |
| 14. Enter Harvest Cash Expense per Acre                              | \$22.27   | \$22.27    | \$22.27   | \$22.27    | \$22.27   | \$22.27    | \$ _____  | \$ _____  |
| 15. Enter Expenses/Bushel (\$0.26 × Line 1) <sup>5</sup>             | \$2.60    | \$2.60     | \$2.60    | \$2.60     | \$2.60    | \$2.60     | \$ _____  | \$ _____  |
| 16. Debt Service, Other Fixed Cash, Needs Family Living <sup>6</sup> | \$75.32   | \$75.32    | \$75.32   | \$75.32    | \$75.32   | \$75.32    | \$ _____  | \$ _____  |
| 17. Total Cash Requirements: (Sum Line 13 to Line 16)                | \$273.92  | \$273.92   | \$273.92  | \$273.92   | \$273.92  | \$273.92   | \$ _____  | \$ _____  |
| <b>Indemnity Payment &amp; Premium</b>                               |           |            |           |            |           |            |           |           |
| 18. Current County NASS Yield reported after harvest                 | 24        | 24         | 24        | 24         | 24        | 24         | _____     | _____     |
| 19. Coverage Level (70% 75% 80% 85% 95%)                             | 90%       | 90%        | 90%       | 90%        | 90%       | 90%        | _____ %   | _____ %   |
| 20. Harvest Market Price                                             |           |            | \$5.00    | \$10.00    | \$5.00    | \$10.00    | \$ _____  | \$ _____  |
| 21. Trigger Yield; Rev. (Line 7 × Line 19); × Line 9; × Line 24      | 44.2      | 44.2       | \$380.92  | \$380.92   | \$380.92  | \$441.86   | \$ _____  | \$ _____  |
| 22. % Co. Yield Loss (Line 21 - Line 18) ÷ Line 21                   | 45.7%     | 45.7%      |           |            |           |            | _____ %   | _____ %   |
| 23. % Co. Revenue Loss (Line 21 - (Line 18 × Line 20)) ÷ Line 21     |           |            | 68.5%     | 37.0%      | 68.5%     | 45.7%      | _____ %   | _____ %   |
| 24. HRO Payment Factor ((Max (Line 20 ÷ Line 9, 1))                  |           |            |           |            | 1.00      | 1.16       | _____     | _____     |
| 25. Indemnity per Acre (Line 10 × Line 22, Line 23 × Line 24)        | \$198.58  | \$198.58   | \$434.88  | \$234.90   | \$434.88  | \$336.55   | \$ _____  | \$ _____  |
| 26. Net Insurance Indemnity Received: (Line 25 - Line 12)            | \$188.72  | \$188.72   | \$399.76  | \$199.78   | \$395.41  | \$297.08   | \$ _____  | \$ _____  |
| 27. Net Cash Flow: (Line 6 - Line 17 + Line 26) <sup>7</sup>         | \$22.76   | \$22.76    | \$233.80  | \$33.81    | \$229.45  | \$131.12   | \$ _____  | \$ _____  |

<sup>1</sup> Direct payment is not subject to price or yield risk but the counter cyclical payment is subject to price risk.

<sup>2</sup> All crop insurance policies under "COMBO" have the same Price Elections except for GRP, that are available from local insurance agents.

<sup>3</sup> Premium rates for a specific farm and proven yield can be obtained from insurance agents.

<sup>4</sup> Obtain crop expense estimates from your records or KSU Farm Management Association Summary. Use only cash expenses because this is a cash flow analysis.

<sup>5</sup> With a low yield, some cash expenses per acre decline, such as trucking and storage.

<sup>6</sup> Debt load, off farm income and/or livestock enterprises will affect cash requirements. Assumes \$61,337 for family living cost and 1,600 acres of crop land (Source: KSU Farm Management Association Summary).

<sup>7</sup> Net cash flow was used for the analysis because normally a farm will not be profitable when a crop disaster occurs. The farmer's short-term strategy is to cover cash flow requirements.

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**Kansas State University Agricultural Experiment Station and Cooperative Extension Service**

MF-2698

November 2011

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