



# Tailored Solutions – Corn Systems Management

## Trial Objective

- Farm operations aim to maximize yield potential and profitability by careful deployment of inputs and practices with the best return on investment (ROI).
- With the current market trend, growers contemplate cutting production costs by eliminating or reducing some inputs.
- The objective of this trial was to determine the economic value of two production systems:
  1. Grower standard system
  2. Premium system (higher inputs)

## Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Planting Rate (seeds/acre)
Huxley, IA	Clay loam	Soybean	Strip tillage	5/16/19	10/28/19	220	33K, 38K

- Three SmartStax® RIB Complete® corn blend products with different relative maturities (RMs) were used for this trial:
  - 108 RM
  - 112 RM
  - 14 RM
- Each product was planted at both the premium and grower standard systems.
  - Grower Standard
    - 33,000 seeds/acre seeding rate
    - 160 lb/acre nitrogen applied pre-plant
  - Premium
    - 38,000 seeds/acre seeding rate
    - 160 lb/acre nitrogen applied pre-plant
    - 40 lb/acre nitrogen side-dressed at V6
    - Foliar fungicide and insecticide application at VT/R1
- The trial was carried out in 30-inch row spacing, 6 rows/treatment with 2 replications.
- Tillage and weed management were the same in both systems.



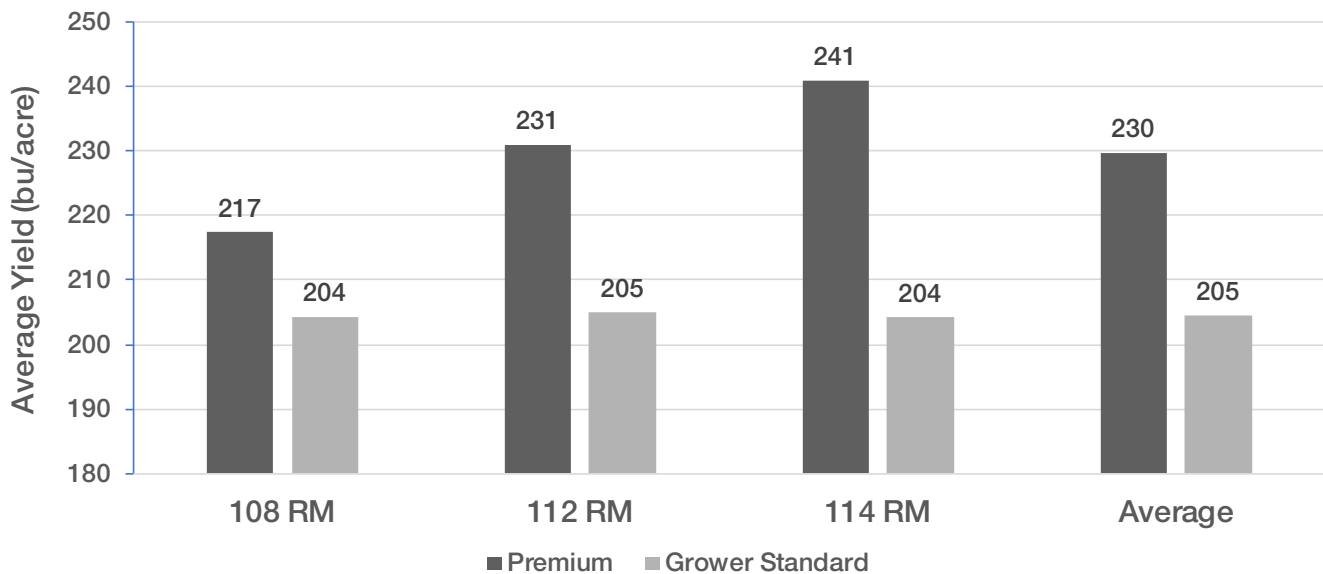
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**Table 1. Inputs and costs associated with the two production systems**

Treatment	Input	108 RM Cost (\$/acre)	112 RM Cost (\$/acre)	114 RM Cost (\$/acre)
Grower Standard	Seed	137.94	133.98	137.94
	Nitrogen	36.8	36.8	36.8
	Total	174.7	170.8	174.7
Premium	Seed	158.84	154.28	158.84
	Nitrogen	46.0	46.0	46.0
	Fungicide + Insecticide	22.0	22.0	22.0
	Total	226.8	222.3	226.8

32% UAN was used as the nitrogen source. Delaro® 325 SC fungicide was the fungicide used and Mustang® Maxx was the insecticide used.

## Understanding the Results



**Figure 1. Yield response of the corn products to two different production systems. Average represents the average yield of the three corn products for each production system.**

- The premium system out-yielded the grower standard, producing an average of 25 bu/acre more yield across all three corn products.
- In this trial, as we increased product relative maturity (RM), we saw a better response to higher management (greater inputs).
- With the current grain price of \$3.50/bu, about 15 bu/acre is required to break even with the extra inputs in the premium system in all three corn products.



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## Key Learnings

- Crop yield response to production inputs can be highly variable, often impacted by the environmental conditions during the growing season. Farmers are therefore advised to consult their trusted crop advisors when making such decisions.

## Legal Statements

The information discussed in this report is from a single site, replicated demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

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IMPORTANT IRM INFORMATION: RIB Complete® corn blend products do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.

Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

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