



Nebraska On-Farm Research Network

Anhydrous Ammonia Timing vs. Rate Comparison

Objective: The objective of this study is to evaluate the effects of two anhydrous ammonia application rates and two application timings (Fall, Spring, Split) on corn yield, nitrogen retention, and economics.

In this example, the grower is interested in comparing two rates (140 lbs N vs. 190 lbs N) and two timings (Spring anhydrous application vs. Split application). However, this protocol can be tailored a number of ways including for other N sources besides anhydrous.

Treatment Design: The following is a four treatment design. At least 3 replications are needed for this study (4 are preferred). The same hybrid and management practices should be used across the entire study area. Each treatment is equal to one pass for nitrogen application and 2 combine widths.

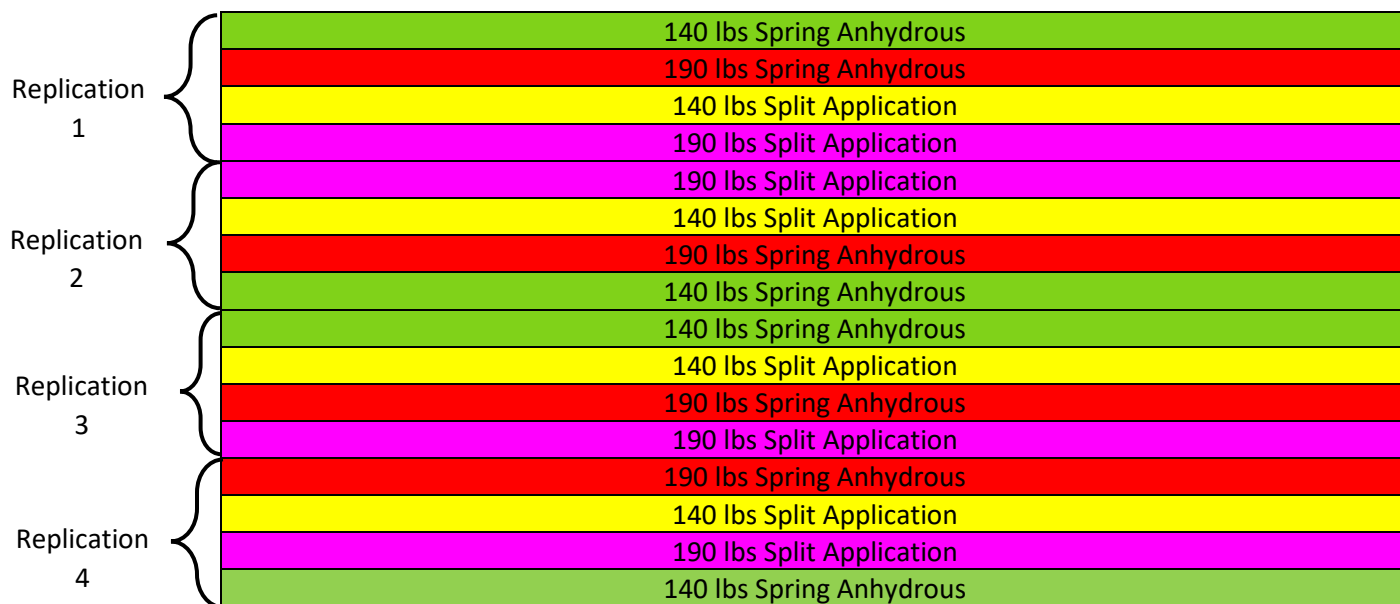
Treatments:

A: 140 lbs N as Spring Anhydrous

B: 190 lbs N as Spring Anhydrous

C: 140 lbs N Split App

D: 190 lbs N Split App



Data collection:

1. Early season stand counts for each strip.
2. Yield for each strip via weigh wagon or yield monitor. If using a yield monitor, the monitor must be well calibrated. Grain moisture should also be recorded.
3. Pre-season soil sampling for complete nutrient analysis at 0-8" depth.
4. Early (0-12"), mid- (0-36"), and late- (0-36") season soil sampling from the same area of each treatment.
5. Site rainfall records will be obtained from interpolated radar estimates.
6. Other information including soil type as defined by USDA, previous tillage conditions, hybrid planted, tillage system, residue type, planting depth, and others will be required to be provided by the grower.

Grower Requirements:

1. Flag or mark GPS location of each treatment.
2. Provide all necessary inputs for crop production.
3. Complete background agronomic form about site and practices.
4. Collect yield data and grain moisture with weight wagon or yield monitor. If using yield monitor, please designate a separate "load" for each treatment and set up separate "products" names for each treatment harvested. Yield monitor must be **well calibrated**. Contact UNL Extension if assistance with this process is needed.
5. Submit harvest data to Nebraska Extension within 30 days of harvest or by Dec. 15.
6. Allow Nebraska Extension to use submitted and collected data for research, educational, and informational purposes.

Nebraska On-Farm Research Network will:

1. Provide technical assistance in setting up replicated and randomized experimental design.
2. Provide assistance upon request with treatment implementation, flagging, stand counts, and recording yield.
3. Analyze raw data using statistical analysis and provide this information to the grower.

Disclaimer: The Nebraska On-Farm Research Network does not endorse the use of products tested in on-farm replicated strip trials. While treatments are replicated within trials and may be replicated across multiple sites under various conditions, your individual results may vary.

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