



Nebraska On-Farm Research Network Soybean Planting Date Research Protocol

Protocol developed by: Jenny Rees and Laura Thompson, Nebraska Extension Educators

Objective: Compare yield and economics of April soybean planting vs. at least three weeks later.

Rationale: Small plot and previous on-farm research studies conducted at Nebraska have shown yield increases by planting soybean prior to May 1. Studies in Nebraska and other states have found early planting to be the primary way to increase soybean yields. However, traditionally corn is planted prior to soybean with soybean planted when corn planting is completed. This plot design helps growers test earlier soybean planting for his/herself.

Treatment Design: The following is an example treatment design for comparing two planting dates. This design allows for a planter pass to be made for each treatment as long as two combine passes can be harvested from that planter pass (i.e. 12 row planter and 6 row combine). A total of 5 replications need to be harvested for this trial (7 is preferred). Planting Date 1 should be planted in April or as close to May 1 as planting conditions allow with Planting Date 2 occurring at least 3 weeks later. We recommend a fungicide/insecticide seed treatment to be applied to seed in both planting dates for a fair comparison. The same variety also needs to be used for both planting dates.

Treatments:

Planting Date 1: in April such as during last week of April or as close to May 1 as possible

Planting Date 2: at least 3 weeks after Planting Date 1

NOTE: Yield from the full header width needs to be obtained for each treatment strip shown below.

Replication 1	Planting Date 1	Yield from header width:
	Planting Date 2	Yield from header width:
Replication 2	Planting Date 2	Yield from header width:
	Planting Date 1	Yield from header width:
Replication 3	Planting Date 1	Yield from header width:
	Planting Date 2	Yield from header width:
Replication 4	Planting Date 2	Yield from header width:
	Planting Date 1	Yield from header width:
Replication 5	Planting Date 1	Yield from header width:
	Planting Date 2	Yield from header width:
Replication 6	Planting Date 2	Yield from header width:
	Planting Date 1	Yield from header width:
Replication 7	Planting Date 1	Yield from header width:
	Planting Date 2	Yield from header width:

Data to Collect:

1. 4" soil temperature prior to planting.
2. Harvest stand counts. In each treatment strip, 2 stand counts will be taken and averaged. Stand counts should be taken from an area of 1/1000 of an acre.
3. (Optional) Nodes and pods per plant. When doing stand counts, take the 5th plant of each stand count and count all nodes and pods per plant. This will result in 2 counts per treatment strip. The two counts will be averaged to determine one count for each treatment strip.
4. Yield. Yield can be collected using a well-calibrated yield monitor or with a weigh wagon.
5. Any observations such as emergence, photos, etc.

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. Collect stand counts at harvest.
6. Submit harvest data to UNL Extension within 30 days of harvest or by Dec. 15.
7. Allow UNL 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, stalk rot tests, 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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