



## Nebraska On-Farm Research Network

### Soybean Replant Research Protocol

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

**Objective:** Identify the impacts of replanting on yield and economics of soybean.

**Rationale:** Numerous research studies conducted by the Nebraska On-Farm Research Network since 2006 have demonstrated optimal yield and profitability can be achieved with final plant stands of 100,000 plants/ac. Situations such as hail damage, crusting, and frost damage can reduce stands and result in questions if replanting will increase yield and how profitability will be impacted. This study allows growers to test these questions by leaving strips of an original stand and replanting (by planting into the existing stand in other strips). This is a 2 treatment design which allows a whole planter width to be replanted (assuming 2 combine passes can be obtained from the planter width).

**Treatment Design:** The following is an example treatment design for a two population comparison. A total of 5 pairs need to be harvested for this trial (7 is preferred). The same variety (preferably or at least similar maturity for replant) and other management practices (including row spacing) should be used across the entire study area.

**Check: Existing Stand**

**Replant: Soybean of similar maturity group planted into the existing stand. Do not destroy the existing stand.**

**NOTE:** The replant can be achieved by making a planter pass, skipping a planter pass, etc. throughout the field. The key is two harvest passes need to be obtained for each planter pass. (For example, if planter is 16 rows, two 8 row harvest passes would be required). Yield from the full header width needs to be obtained for each treatment strip shown below. Please contact your local Extension educator or Jenny/Laura with questions.

Replication 1	Check	Yield from header width:
	Replant	Yield from header width:
Replication 2	Replant	Yield from header width:
	Check	Yield from header width:
Replication 3	Check	Yield from header width:
	Replant	Yield from header width:
Replication 4	Replant	Yield from header width:
	Check	Yield from header width:
Replication 5	Check	Yield from header width:
	Replant	Yield from header width:
Replication 6	Replant	Yield from header width:
	Check	Yield from header width:
Replication 7	Check	Yield from header width:
	Replant	Yield from header width:

*Data to Collect:*

1. 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.
2. Indicate if there's more lodging and weed pressure in any treatments visually.
3. Yield. Yield can be collected using a well-calibrated yield monitor or with a weigh wagon.
4. Any observations such as weed pressure, lodging, 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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