

# Cover Crop Termination Date Strip Trial

## “MU Certified” Strip Trial Program

**Objective:**

How do delays in cover crop termination affect grain yield and residue cover?

**Approach:**

Compare two termination dates on fields with existing cover crop.

**Key design elements:**

- Farmer choice of cover crop or crop mix that does not winter kill.
- Compare two termination dates at least 7 days apart in corn, 10 days apart in soybean. Farmer selects termination dates.
- Note that this trial requires two passes with the sprayer.
- Soybean, corn and milo preferred grain crops.
- Minimum of four replicates (eight strips), prefer more.
- Farmer defines all grain crop management decisions (variety, seeding rate, and planting date; fertilization; weed and pest control; harvest date).
- We need a yield map from the whole field; prefer an as-applied map from termination applications

**Information needed to layout trial:**

Name:	Phone:	Email:
MU Extension Contact:	Phone:	Email:

<b>Field Information</b>	
Field location/size:	Harvest direction:
Cover crop(s) planted/seeding rate:	Planting date:
Termination date objectives:	Planned grain crop:

<b>Equipment</b>		
Sprayer type/model:	Sprayer width (ft):	GPS enabled? yes or no
Spray controller type/model:		
Planter type/model:	Planter width (ft):	GPS enabled? yes or no
Combine type/model:	Combine width (ft):	GPS enabled? yes or no
Yield monitor type/model:		

**Interested?**

Contact the local Extension Office or David Kleinsorge ([KleinsorgeD@missouri.edu](mailto:KleinsorgeD@missouri.edu); 573-884-8696).

**Termination trial in Cooper County in 2018. A cereal rye cover crop was terminated 13 days before planting and on the same day as planting (May 8). Image was taken June 12.**



## More Information

### Key measurements

- Farmer estimate of cover crop growth stage, and height/biomass at termination dates.
- Aerial imagery will be obtained between termination dates to confirm location of treatments.
- High-resolution images will be obtained using low-altitude UAV at points in the field at pre-canopy closure to assess residue, weed control, and stand issues.
- Aerial imagery will be obtained in early July (corn) to assess nitrogen status or August (soybean) to assess stand issues. Scouting for any stand issues identified.
- Farmer provides GPS referenced yield map.

### Key additional information needed from farmer:

- Prefer as-applied/coverage map for herbicide applications.
- Information on cover crop and grain crop including planting dates, seeding rates, termination/harvest dates, herbicide management, and for corn, nitrogen fertilizer program.

### Key trial implementation notes:

- We will work with you to create a treatment map for your field. Typically will alternate treatments across the field.
- For soybean crops, spray treatment strips parallel to your harvest direction, not your planting direction.
- We will try to create a trial where you do not change how you harvest.
- Work with your local extension specialist and state program staff if you have questions.

### High resolution images of treatments on June 12, 2018 of Cooper County trial.

Terminated April 25, 2018

Terminated May 8, 2018



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