# Cover Crop Termination Time "Planting Green" Study

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**Background:** No-till cover crop systems in the Mid-Atlantic region can pose agronomic and pest management challenges, including plant residue interference with seed placement or poor row closure due to high moisture, and providing ideal slug habitat, resulting in reduced yields. Typically, cover crops are terminated one to two weeks before planting, but some farmers are delaying termination until planting or later for soil conservation and soil moisture management.

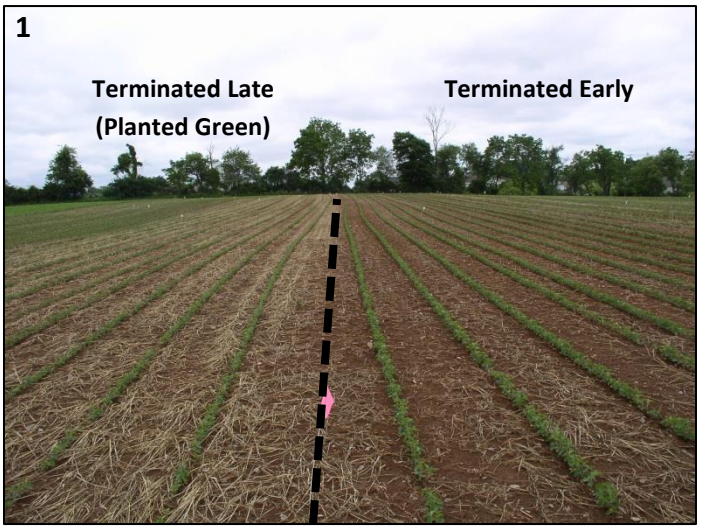
**Hypothesis:** We hypothesize that terminating cover crops at cash crop planting rather than earlier will improve seedbed conditions for planting; **extend soil and water conservation benefits of cover crops**; and reduce slug damage to the subsequent crop for corn (Zea Mays) or soybean (Glycine max).

**Research Farm Sites:** The corn experiment consists of rye, crimson clover, or a rye-crimson clover mix, terminated either early or at corn planting (6-8 treatments, 60 x 75 ft plots) with four replications. The soy experiment consists of 30, 60, or 120 lb/A rye seeding rate, 30 or 60 lb/A N fertilization rate, terminated either early or at soybean planting (12 treatments, split-split plots 30 x 75 ft) with 4 replications.

**Myers Farm Site:** Two soybean experiments with rye cover crop at one seeding rate across the farm; treatments were either terminated either early or at planting of the cash crop with 4 replications. TA Seeds- TS2849R2S (2.8 RM, RR 2Yield, STS, no seed insecticide) was ***planted May 14***.

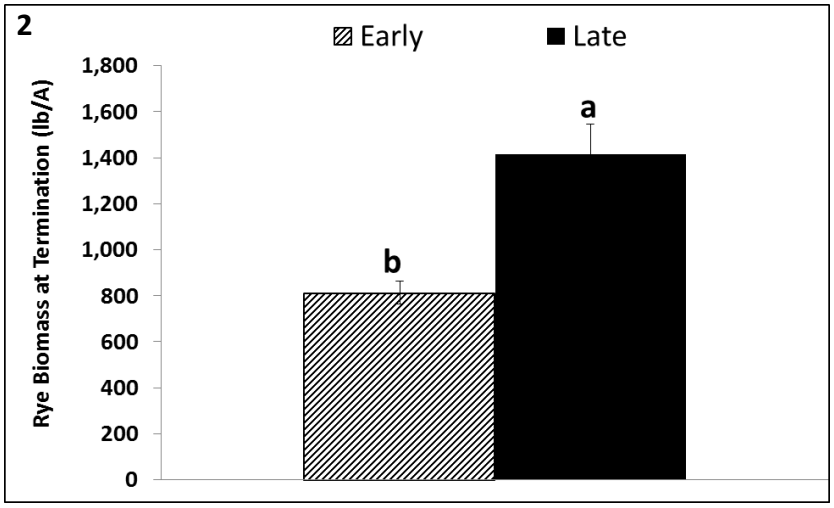
**Measurements:**

- Rye biomass at early termination and at planting
- Cash crop stand counts
- Soil Moisture
- Soil Temperature
- Soil Cover
- Slug Population




**Year One Results**

- Averaged across both fields, almost 75% more rye biomass was present at late termination (planting green) than early termination [1,2]
- Soybean population was an average of 7% lower in late terminated (planted green) plots[3]
- Soil cover was an average of 16% higher in late terminted (planted green) treatments for three weeks after planting[4]
- Soil temperature was largely unaffected by termination time
- Soil moisture was lower in late terminated (planted green) treatments at the beginning and end of summer[5]



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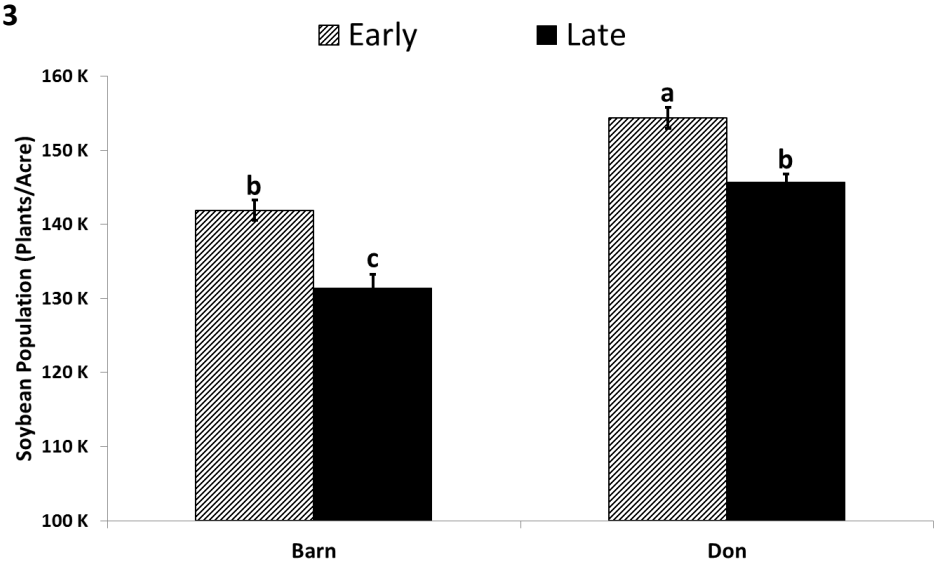


Bars (treatments) with different letters are different from each other (significance $p < 0.05$).

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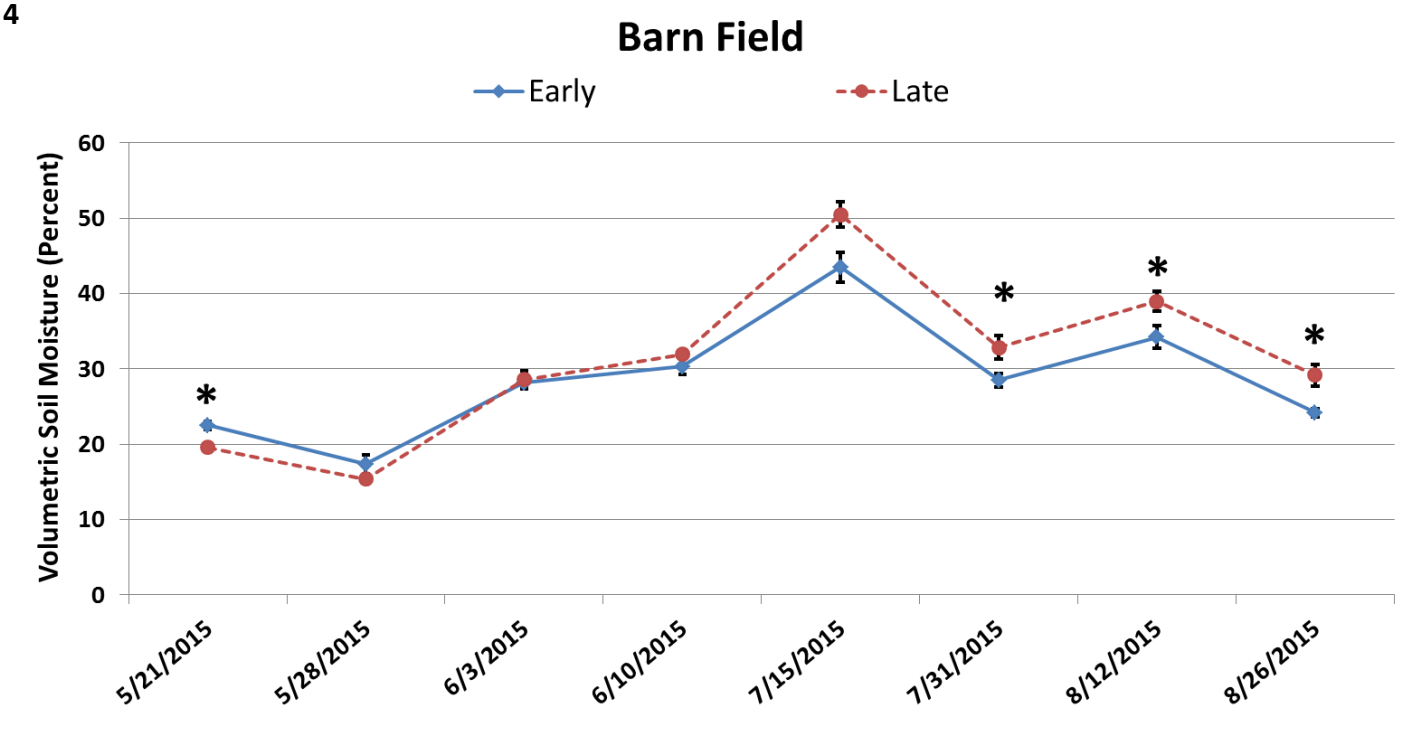


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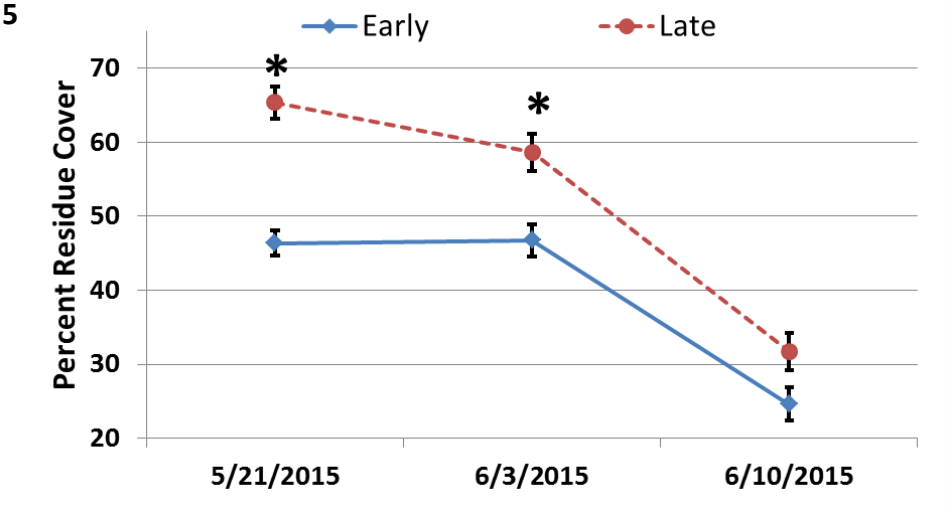


Asterisks (*) indicate differences between treatments at each date (significance $p < 0.05$)