

What is the Ideal Cover Crop Planting Window for Optimal Establishment and Cash Crop Yield?

Understanding the Importance of Cover Crop Planting Dates in Soybean & Corn Rotations Project Status: Year 2

NATHAN JOHANNING

Extension Educator, Commercial Agriculture, University of Illinois Extension

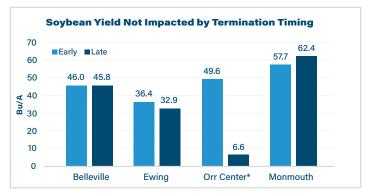
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HOW TO APPLY THIS RESEARCH TO YOUR FARM

For Fields Rotating from Corn to Soybeans:

- Plant cereal rye into corn stubble by mid-October at lower seeding rates (30-60 lbs/A) for greater biomass and more reliable cover crop establishment.
 - Planting in late-September yielded an average of 1,500 more lbs of dry biomass/A compared to planting in mid-November.
- Lower seeding rates (30-60 lbs/A) can yield similar biomass production as higher seeding rates (90-120 lbs/A), regardless of cereal rye planting date.
 - A farmer can plant at lower seeding rates in mid-November and still achieve similar biomass as higher seeding rates.
- Timing of cover crop termination did not impact soybean stand or yield, with one exception where voles negatively impacted yield in the late termination plot at Orr Center.



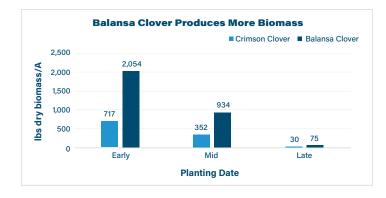
*Orr Center Late Termination plot experienced heavy vole feeding, which significantly impacted stand and yield.

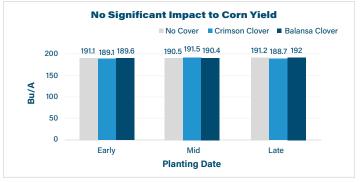
For Fields Rotating from Soybeans to Corn:

Plant clover cover crops before mid-October for better overwintering and biomass production (2,054 lbs dry biomass/A late September vs. 75 lbs in mid-November). Of the two clover species studied, balansa clover produced more biomass than crimson clover.



If planted by mid-October, both clover cover crops survived the winter and had no significant impact to corn stand counts or yield compared to no cover crops.





RESEARCH APPROACH

Conducted two replicated strip research trials at each of four locations

- Cereal rye after corn before soybean seeding
 - Locations: Belleville, Ewing, Orr Center, Monmouth
 - No-till drilled at 30, 60, 90 and 120 lbs/A into corn stubble
 - Planted from late-September to mid-November about three to four weeks apart, representing early, mid and late planting dates
 - Rye termination evaluated at 18"-24" tall (two to three weeks before planting) and mature cereal rye (at planting)
- Balansa vs. crimson clover after soybean before corn seeding
 - Locations: Belleville, Orr Center
 - No-till drilled into soybean stubble at three-week intervals from late-September to late-October, representing early, mid and late planting dates
 - Terminated at corn planting





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