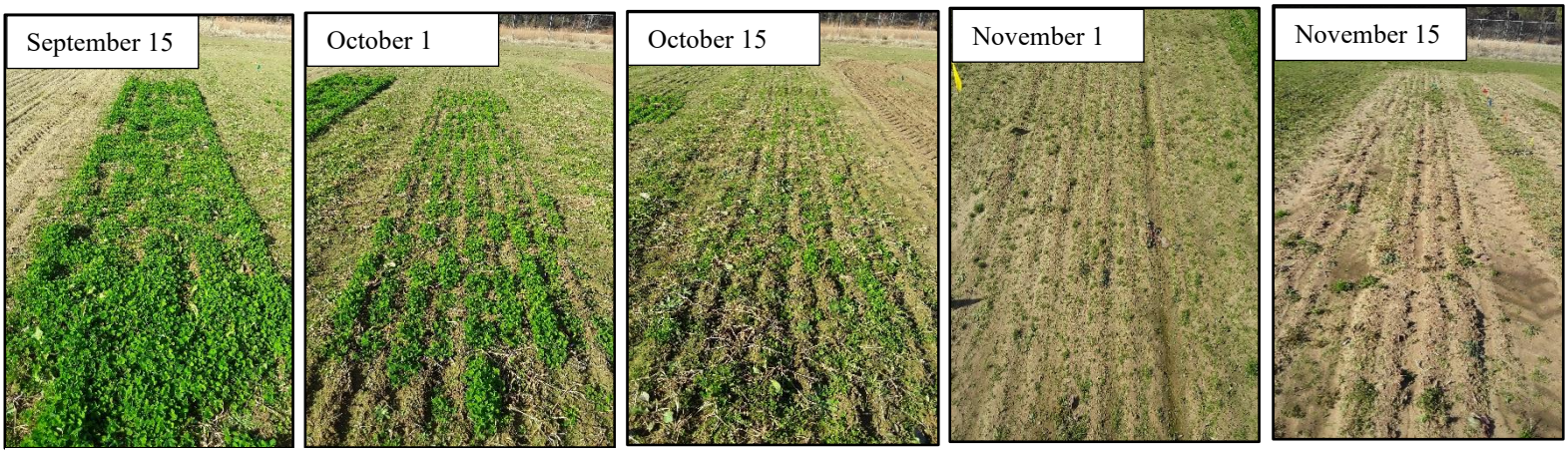
NRCS Jamie L. Whitten Plant Materials Center
2025 Report of Activities

Planting and Termination Date Effect on Aboveground Performance of Two Cool Season Legume Cover Crops

Annual cool season legume cover crops may provide many benefits to production agriculture such as controlling soil erosion, reducing fertilizer costs, and improving yield. However, the success of an annual cool season legume is dependent on choosing proper planting and termination dates so that the cover crop can address the resource concern. The purpose of this study was to evaluate two cool season annual legume species based on planting and termination date combinations to identify best practices with cover crops. Crimson clover (*Trifolium incarnatum*) and hairy vetch (*Vicia villosa*) were evaluated at the Jamie L. Whitten Plant Materials Center (MSPMC) near Coffeeville, MS in 2022-2023 and 2023-2024 for dry matter production, nitrogen yields, phosphorus yield, and potassium yield. Crimson clover planted from September 15 to October 15 and terminated on or after April 15 had significantly higher dry matter, nitrogen, phosphorus, and potassium yields compared to November plantings. Crimson clover planted in November failed to emerge in 2022-2023. It is recommended to plant crimson clover from September 15 to October 15 and terminate on or after April 15. Hairy vetch planted between September 15 and October 15 and terminated on or after April 15 had the highest dry matter production, nitrogen yield, phosphorus yield, and potassium yield compared to November plantings. It is recommended to plant hairy vetch between September 15 and October 15 to maximize cover crop benefits.



Picture(s) above: 'Dixie' Crimson Clover planted from left to right on September 15, October 1, October 15, November 1 and November 15. Photo was taken on November 30, 2023.

MS Plant Materials Technical Notes:

- MS Plant Materials Technical Note No. 110: 'Cosaque' black-seeded oat (Aventa sativa L.): Effect of Planting Date(s) and Harvest Date(s) on Forage Quality and Quantity.
- MS Plant Materials Technical Note No. 111: 'Elbon' cereal rye: Effects of Planting and Harvest Dates on Forage Quality and Quantity
- MS Plant Materials Technical Note No. 112: 'SF-813' winter triticale: Effects of Planting and Harvest Dates and Harvest Date on Forage Quality and Quantity
- MS Plant Materials Technical Note No. 113: '30-06' winter wheat: Effects of Planting and Harvest Date on Forage Quality and Quantity

Jamie L. Whitten Plant Materials Center Plant & Seed Production

NRCS releases plants for natural resource conservation and revegetation activities through its PMCs. To ensure the availability of releases, PMCs produce Breeder and Foundation materials for cultivars or early generation germplasm materials of pre-variety releases. These materials are available for allocation to seed certifying organizations and/or commercial growers for establishment of seed fields and orchards for large-scale increase. The MSPMC currently maintains four releases for seed and/or plant production. Seed for these releases can be acquired through MAFES Foundation Seed Stock. We can also provide technical assistance for these plant releases.

Publications, Presentations, Outreach, & Trainings

- Report of Activities – 2024
- Area 3 Pollinator Training (11/05/2024) – 50 participants (NRCS employees and local landowners) attended a pollinator field day in Lucedale, MS utilizing a field that the PMC Staff have been providing technical guidance on. Key aspects of pollinator species establishment such as field preparation, seed purchases, planting, and maintenance were discussed.
- Yalobusha Garden Club Meeting (02/25/2025) – MS PMC staff participated in an annual meeting with the Yalobusha Garden Club in Water Valley, MS. Approximately 30 attendants (landowners) were given a presentation demonstrating the role of the Plant Materials Program and current research being conducted at the MSPMC.
- Cover Crop Training in Tunica, MS (08/06/2025) –landowners and NRCS field office staff (40 participants) attended a cover crop training in Tunica, MS. Participants heard from PMC Staff and NRCS Field Staff on utilizing cool season cover crop species to address resource concerns.
- Warm Season Forage Identification Training for NRCS Field Staff (09/18/2025) – 40 participants (NRCS employees and Mississippi State Extension) attended a warm season forage identification course at the MSPMC to enhance knowledge on common forage species identification in the Mid-South. Dr. Rocky Lemus attended and demonstrated key ID features to identify common forage species and weeds.

The Jamie L. Whitten Plant Materials Center

The MSPMC works with NRCS field offices and land managers in Mississippi, Louisiana, Alabama, Arkansas, Kentucky, Missouri, and Tennessee. We provide vegetative solutions for soil health, pastureland improvement, urban conservation, and water quality improvement. The center also releases improved conservation plants to address resource challenges such as wetland mitigation, erosion control, riparian buffers, and wildlife habitat.

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