



# Reseeding Methods of 'Meechee' Arrowleaf Clover

A Fact Sheet from the Jamie L. Whitten Plant Materials Center

'Meechee' arrowleaf clover (*Trifolium vesiculosum* Savi) is a cool season, reseeding annual legume released by the USDA-NRCS Jamie L. Whitten Plant Materials Center (PMC) in Coffeerville, MS. Meechee is a multiple purpose legume that can be used for grazing, hay production, wildlife food, soil improvement and winter cover crop. Forage quality is high with digestibility generally superior to crimson clover at all stages of maturity. Deer and turkey readily feed on arrowleaf clover.

Meechee will grow to a height of 40 to 50



inches under normal growing conditions. Seed germinate in the fall, but grow slowly during the early winter. A majority of the growth is between February and May. Meechee will continue to develop new leaves and remain productive longer in the spring when grazed to a height of 2 to 4 inches. If managing for a hay crop, clover should be grazed until early to mid-April, then harvested at early to mid-bloom in May.

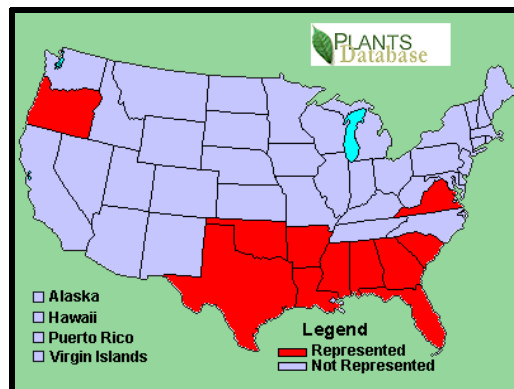
Meechee is capable of large seed yields

ranging from 200 to 300 lbs per acre, with approximately 75% hard seed. This hard-seededness allows arrowleaf clover to maintain long term stands.

Meechee arrowleaf clover can produce volunteer stands for up to five years if allowed to reseed periodically. Meechee is established by seed from September to mid October. Seed can be drilled at 10 lbs/acre or broadcast at 15 lbs/acre with proper inoculant.

### Meechee Arrowleaf Clover Highlights

- Ease of establishment.
- Capable of large seed yields.
- Clover residue does not interfere with planting operations.
- Dry matter production and canopy cover are comparable to crimson clover and hairy vetch.



Meechee arrowleaf clover is adapted across much of the southeastern U.S.

**United States Department of Agriculture**

**Natural Resources Conservation Service**

**Jamie L. Whitten Plant Materials Center**

**Coffeerville, MS**

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**This Fact Sheet is the fourth of a series of technical information on plant materials.**

### Available Fact Sheets

- No. 1 Native or Introduced?
- No. 2 Spring Flood Tolerance of Selected Perennial Grasses
- No. 3 Morton Germplasm Shrub Willow



## Cover Crop Potential

Widespread use of legume cover crops has been limited because of the relatively low cost of N fertilizers and the high cost of annual legume establishment (Allison and Ott, 1987). The annual cost of cover crop establishment could be reduced or eliminated by selecting and managing legumes species to insure self-reseeding (Touchton et al., 1982).

However, natural reseeding of winter legumes is not necessarily compatible with the production of summer grain crops in the southeastern United States. Overlapping growing seasons often results in the winter crop being destroyed in early spring to facilitate planting of the summer crop before the legume can produce a seed crop. Even with proper seed production there are many factors effecting the legume's ability to reseed. Seed must be able to oversummer on top of or in the soil or they will germinate and compete with the row crop (Boquet and Dabney, 1991).

A study was conducted at the Jamie L. Whitten PMC, beginning in 1995, to determine the influence of soil disturbance on the reseeding of Meechee arrowleaf clover and to determine its effectiveness as a cover crop.

When Meechee was allowed to grow without interference from grain sorghum, percent canopy cover remained high averaging 97%. However, in a cropping system with no soil disturbance (shred stalks only) Meechee began to show signs of decline in 1998. In 1999, canopy cover had been reduced to 51%.

We found that clover stands with minimum soil disturbance had higher percent canopy cover than plots without soil disturbance. Hipped rows were found to decrease canopy cover due to relocation of viable seed from the furrow to the formed bed.

Our study found that Meechee arrowleaf clover requires minimum soil disturbance to maintain acceptable volunteer stands if grown in a cropping system.



One disadvantage of using Meechee arrowleaf clover as a cover crop is that it will not mature seed until July or August, which is after the recommended planting date of conventional row crops. A possible solution to this problem is to use it on set aside or fallow cropland the year before returning it to production.

Soil disturbance will also assist the natural reseeding of Meechee when used as a conservation cover or in a wildlife planting.

## Literature Cited

Allison, J.R., and S.L. Ott. 1987. Economics of using legumes as a nitrogen source in conservation tillage systems. P. 145-150. In J. F. Power (ed.) The role of legumes in conservation tillage systems. Soil Conserv. Soc. Am. Ankeny, IA.

Boquet, D.J. and S.M. Dabney. 1991. Reseeding, Biomass, and Nitrogen Content of Selected Winter Legumes in Grain Sorghum Culture. Agron. J. 83:144-148.

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