



# PLANT MATERIALS MIDSOUTH

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## NEW STUDIES UNDERTAKEN

by: Mike Lane, PMC Manager

At the Plant Materials Technical Committee meeting held in May, these new studies were recommended:

1. Seeding mixtures for critical areas - to evaluate the best time and method of planting partridge pea and trailing wildbean.
2. Effects of herbicides on selected native plants to determine susceptibility of desirable native plants to pre- and post-emergence herbicides.
3. Switchgrass seed germination study - to find how seed aging, seed storage methods, and pre-chilling seed affects germination.
4. Arrowleaf clover reseeded - to find the best fall management for no-till milo to ensure reseeding of arrowleaf clover from residual hard seed in the soil.
5. Herbicide programs for no-till southern pea - to evaluate pre- and post-emergent herbicide treatments for purplehull peas double cropped with wheat.
6. Reestablishing forages on CRP fields - to evaluate fall planting of forages in CRP fields that have undergone chemical broomsedge control.
7. Intercenter Eastern gamagrass trial - to evaluate 13 Eastern gamagrass selections from six PMCs to find the best one for our service area.
8. Herbicide rates and timing for CRP fields - to determine the best herbicides to eradicate broomsedge in CRP fields and the optimum time of application.

Our thanks to the Technical Committee for spending 2 days evaluating our program and making these recommendations.

## 'WORLD FEEDER' BERMUDAGRASS

by: Joel Douglas, PMS

'World Feeder' is a new variety of bermudagrass developed and promoted by private individuals in Oklahoma. Promotional advertisements have reached popular forage magazines and newspapers throughout the MidSouth, and cattle producers have been seeking information about adaptation and performance in Mississippi. Mississippi Agricultural and Forestry Experiment Stations (MAFES) conducted bermudagrass variety trials annually on new and old varieties. However, MAFES was unable to include 'World Feeder' in their variety trials in 1995.

In an attempt to answer the question of whether 'World Feeder' is adapted to Mississippi, adaptation plantings were made last spring. Plantings were made at the PMC and at MAFES in Raymond and Pontotoc. These locations represent North and Central Mississippi. 'World Feeder' was sprigged in a tenth of an acre plot at the PMC alongside 'Tifton 44' and 'Tifton 85' for comparison, and alone at the other locations. Fertility and lime was applied according to soil test recommendations.

Despite adequate soil fertility and favorable moisture at planting and in early summer, 'World Feeder' was extremely slow in establishing and never produced a 100% stand. Late season weed competition was a problem in the 'World Feeder' plot because of lack of spread and ground cover density whereas minimal weeds were present in the 'Tifton 44' and 'Tifton 85' plots. Slow establishment, spread and low vigor were reported at the other locations. Unfertilized stands of common bermudagrass; at the PMC exhibited more vigor than 'World Feeder'.

As of early Summer, 'World Feeder' lacks vigor and production as seen in 'Tifton 44' and 'Tifton 85'. This is probably due to lack of climatic adaptation. Landowners should be encouraged to invest their resources in proven bermudagrass varieties rather than on varieties of unproven performance.

### **COVER CROP UPDATE**

by: Herby Bloodworth, Agronomist

'Meechee' arrowleaf clover is one of this PMC's plant releases. Over the years, seed has been harvested from excellent volunteer stands. In 1992, two experiments were initiated to evaluate the potential of reseeding arrowleaf clover as a cover crop and N source for no-till (NT) cotton and NT grain sorghum.

Over a three year period, arrowleaf clover produced enough N for maximum grain sorghum and cotton yields, however, two problems were noticed. Cotton during the first year did not mature until November. This was attributed to excessive soil N levels built up over the years by arrowleaf clover. Delayed plant maturity can be avoided by planting a high N requiring crop like corn where arrowleaf has been grown for seed production for several years. Secondly, as these studies progressed, reseeding clover stands decreased. Another experiment has been initiated to determine the minimum amount of soil disturbance required to ensure satisfactory stands from residual hard seed. It has been noted that volunteer stands of arrowleaf clover will occur for many years after one good seed crop.

### **TOUGH WINTER FOR LEGUMES**

by: Mike Lane

I've heard comments from people across the South who have had cover crop failures this winter. We had problems at the PMC but only on some plots. Mid-October vetch did okay while late October vetch of the same variety was extremely poor. I guess that confirms the general recommendation that vetch should be planted early. Our Carolina clover, a reseeding annual, froze out completely. So did the bur clovers except for those planted two weeks earlier. The old stands reseeded fine. Ironically, some legumes did better than usual. Arrowleaf clover, ball clover, and most of the white clovers are better than usual although I suspect some early spring germination of hard seed accounts for some of this. Planting on prepared seedbeds generally resulted in poorer stands, too.

Early no-till planting of legumes into old crop stubble seems to be the way to go.

### **TECHNIQUES FOR GROWING WILDFLOWERS**

by: B. B. Billingsley, Project Leader

Many of our native wildflowers can be successfully grown along roadsides, in wildflower meadows, and similar areas. By growing them it is often possible to reduce mowing and maintenance costs while still retaining a pleasing appearance. Select planting sites which can be managed by mowing. Late summer is a good planting time for many species. Mow to a height of 3-4 inches, lightly scarify the soil with a disk to allow seed to reach mineral soil, and broadcast or drill seed on the soil surface. It is not necessary or desirable to plant seed onto a clean tilled site. Seed germination (1) occurs within a few weeks (these plants will remain small and low growing until spring) or (2) it may be delayed until spring. Once a stand is established, a mowing schedule which will favor the wildflowers and reduce competition from other plants is very important in maintaining an attractive, long lasting stand. Mowing two-three times per year is usually sufficient, with the first mowing following flowering and seed maturity of the wildflowers, and another mowing after frost. Another mowing in late summer to early fall may be beneficial if the wildflowers mature early in the summer.

Remember that some wildflowers are slow to develop and may take more than one year for full stand development. If a stand begins to decline after several years, a light soil disturbance and/or a winter burning will usually rejuvenate the stand. Light applications of fertilizer may be applied if desired, but little supplemental fertilization is usually necessary.

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