at the Aiken trial and mid-season treatments differed in that imazapic increased TERM (56% vs. 11%) and decreased HGT (1.0 vs. 1.8 ft), and in that SURV was higher for the low rate of sulfometuron (72% vs. 51%).

Acceptable crop tolerance was achieved with all treatments with the exception of imazapic on cottonwood. However, the low TERM, high SURV, and HGT for sweetgum following over-the-top mid-season applications at the Dorchester trial suggests good seedling quality can significantly increase crop tolerance. The excellent control at the Dorchester trial compared to the Aiken trial suggests that quality of the initial treatment can determine the success of the mid-season treatments and that a 5 week delay between initial and mid-season applications was better than a 12 week delay.

COMPARISON OF SULFOMETURON METHYL FORMULATIONS FOR USE IN NUTTALL AND CHERRYBARK OAK PLANTATIONS. A.W. Ezell, Mississippi State University, Starkville.

ABSTRACT

Oust ® has a new formulation and this study was designed to compare the "new Oust" to the "current Oust" in field applications over-the-top of planted oak seedlings. Competition control and crop tolerance are both of principal concern in these situations.

A total of six herbicide treatments were applied over planted Nuttall and cherrybark oaks (Table 1). In addition an untreated check was incorporated for comparison. All treatments were replicated four times on the Nuttall and three times on the cherrybark seedlings. Percent ground cover was estimated ocularly in April, June, and September by vegetative category, and survival was measured in November.

The seedlings were planted in early February, pre-emergent treatments applied in early March, and "full leaf" treatments applied in mid-May. The soil was an Urbo silty clay loam with a pH=5.7.

As expected, competition control decreased as the growing season passed, but certain aspects of control were noteworthy. First, broadleaf control remained consistent throughout the growing season. Increases in forb coverage were slight to moderate and overall, the treatments provided excellent control. Many of the plots would have been relatively clear in September if not for vines. Second, grass competition (and coverage) resulted primarily from dallisgrass (*Paspalumdilatatum*). Other grass and sedge species did not pose a problem. Third, vine coverage increased throughout the growing season due to peppervine (*Ampelopsis arborea*). Oust will not control this species, and it is aggressive. Fourth, pre-emergent applications are much more effective than post-emergent. Finally, no differences could be detected between the formulations in weed control.

In an examination of crop tolerance, no damage resulted to the oaks from any of these applications. Of note is the fact that these two species had demonstrated a tolerance for post-emergent Oust applications in earlier non-statistical evaluations. All species may not exhibit this same tolerance.

The growing season of 1999 resulted in a most serious drought on the study site, which lasted from May until December. Undoubtedly, the drought exaggerated the difference between treated and untreated plots. For cherrybark oak, actual survival was 26-49% higher in treated plots. In Nuttall plots, actual survival was 33-53% higher than in untreated areas. Overall, no consistent trends existed between formulations in terms of survival. The differences were reflective more of microsite variation within treatment plots. Survival was very consistent in untreated areas.

List of treatments in 1990 Oust/oaks field study

Treatment No.	Formulation/Rate	Application Time
	- - - - - - - AI/A - - - - - - -	
1	New Oust (1.5 oz)	Pre-emergent
2	Current Oust (1.5 oz)	Pre-emergent
3	New Oust (2.25 oz)	Pre-emergent
4	Current Oust (2.25 oz)	Pre-emergent
5	New Oust (1.5 oz)	Full leaf
6	Current Oust (1.5 oz)	Full leaf
7	Untreated Check	