Table 3. Woody stem control (percent change) in 1998 Novartis site preparation study – South Carolina

Treatment	Species			
	Black Cherry	Plum	Sweetgum	Total
	percent			
1	-50 a *	-56 ab	-94 a	-75 ab
2	-42 a	-90 a	0 b	-49 bc
3	-50 a	-19 bc	-50 ab	-39 cd
4	-33 a	-100 a	0 b	-60 abc
5	+33 a	-75 a	-100 a	-74 abc
6	-100 a	-96 a	-100 a	-87 a
7	-35 a	-71 a	-68 a	-59 abc
8	-39 a	-50 abc	-100 a	-13 de
9	-100 a	-100 a	-97 a	-91 a
10	0 a	0 c	-67 a	0 e

* negative changes indicate a reduction in stems and values followed by the same letter in a column do not differ at P = 0.05

EFFECTS OF APPLICATION TIMING ON WOODY STEM CONTROL USING DICAMBA TANK MIXTURES. L.R. Nelson and A.W. Ezell. Clemson University, Clemson, SC; and Mississippi State University, Starkville.

ABSTACT

Herbicide treatments were installed during the 1998 growing season at two locations to evaluate effects of application timing on pine and hardwood control using dicamba (Vanquish®) mixed with either imazapyr (Arsenal Applicators Concentrate®), glyphosate (Accord®) or triclopyr (Garlon 4®). Study sites included a piedmont site near Starr, SC and an upper coastal plain site near Starkville, MS. Treatments included dicamba @ 2 qt + glyphosate @ 3 qt product/ac, dicamba @ 2 qt + triclopyr @ 2 qt product/ac and dicamba @ 2 qt + imazapyr @ 16 oz product/ac. Treatments were applied with a CO_2 pole sprayer in mid-June, mid-July and mid-August in South Carolina and at the same times plus a mid-September application in Mississippi. A complete randomized design with three replications was used at both sites. Dominant hardwood species were black cherry, red oak spp. and sweetgum in South Carolina and red maple, red oak spp., swamp chestnut oak and winged sumac in Mississippi. Evaluations were conducted 12 MAT. Reduction of the number of woody stems/ac by species was used as a measure of control.

Significant herbicide treatment and timing effects occurred on hardwoods in South Carolina. Vanquish @ 2 qt + Arsenal @ 16 oz resulted in a 55 % stem reduction of sweetgum compared to a 10 and –18 % reduction with Vanquish @ 2 qt + Accord @ 3 qt and Vanquish @ 2 qt + Garlon 4 @ 2 qt/ac, respectively. July and August applications resulted in approximately 30 % stem reduction of red oak species compared to 1 % with June applications. Effects on other species were not significant.

In Mississippi both treatment and timing effects were significant. Vanquish @ 2 qt + Garlon 4 @ 2 qt provided a 73 % stem reduction of loblolly pine compared to 19 and 21 % for the Arsenal and Accord mixtures, respectively. The Vanquish + Arsenal tank mixture provided 92 % stem reduction of red maple compared to 58 and 47 % for Vanquish mixed with either Accord or Garlon 4, respectively. Both the Arsenal and Accord mixtures provided better than 75 % control of red oak spp. compared to 33 % with the Garlon 4 mixture. Optimum application timing varied by species. June and August applications on loblolly pine were significantly better than July or September applications. June, August and September applications resulted in approximately 80% control of red maple compared to 57% with the July application. June and July applications resulted in 50 to 60 % control of red oaks while stem numbers increased following August and September applications.

A COMPARISON OF BASAL BARK TREATMENTS USING GLYPHOSATE AND MON 59120. J.L. Yeiser, Stephen F. Austin State University, Nacogdoches, TX 75962; L.R. Nelson, Clemson University, Clemson, S.C. 29634-1003; and A.W. Ezell, Mississippi State University, Mississippi State, MS39762.

ABSTRACT

Monsanto 59120 is a proprietary surfactant potentially providing the water solubility and bark penetration needed by Accord during low-volume, basal bark applications. Dormant and growing season, low-volume basal bark applications of Monsanto 59120+Accord were applied to a height of 14 in. without runoff and assessed for crown reduction of selected woody species in Arkansas, Mississippi, and South Carolina. After two growing seasons, crown reduction was greater for mixtures of Monsanto 59120+Accord than Accord alone. Monsanto 59120+Accord in a 50:50 mixture provided growing season control of pine and sweetgum comparable to the industry check, Garlon 4+vegetable oil (20%+80%). However, Garlon 4+vegetable oil (20%+80%) provided best overall dormant and growing season control across all test species.