

LOTUS RESEARCH IN GEORGIA
 Carl S. Hoveland
 Agronomy Dept., University of Georgia
 Athens, GA 30602

Birdsfoot trefoil is grown mainly in the northern USA. However, several cultivars such as AU Dewey and Fergus have performed well as far south as the mountains and upper Piedmont area of Georgia. Persistence and productivity have been good in association with tall fescue and orchardgrass. The high quality of this legume merits greater use in southern areas. However, persistence has been poor in association with warm season grasses such as bermudagrass and bahiagrass, limiting the southern adaptation of birdsfoot trefoil. Both Fergus and AU Dewey are recommended cultivars in north Georgia.

Management of birdsfoot trefoil in the Georgia Piedmont

Several field experiments over 3 years were conducted to determine the effects of cutting treatments on northern and southern trefoils in the stressful summer environment of north Georgia.

The AU Dewey and GA 1 trefoil entries, selected in Alabama and Georgia, respectively, had greater root weights and diameter than the northern-developed cultivars.

Root weight and diameter of five birdsfoot trefoil entries when harvested at 21-day intervals.

Entry	<u>Stubble height (cm), average of 2 yr</u>			LSD %	<u>3rd year</u>	
	3	5	10		Root weight g/plant	Root diameter mm
	-----root weight (g/plant)-----					
AU Dewey	1.7	2.2	2.6	0.4	3.1	2.9
GA 1	1.6	2.1	2.3	0.3	2.9	2.8
Norcen	1.5	1.6	1.8	0.2	2.1	2.1
Dawn	1.3	1.4	1.8	0.2	2.2	2.3
Fergus	1.1	1.3	1.2	NS	1.3	1.6
LSD (5%)	0.2	0.3	0.3		0.5	0.3

Total non-structural carbohydrates (TNC) levels were greater in midseason when the harvest stubble height was 10 instead of 3 cm. A positive correlation was found between spring herbage yields and the mean TNC level of the 2 preceding years.

AU Dewey, GA 1, and Fergus were the most productive entries, but herbage yields of all entries increased with length of time between harvests. Harvesting every 21 days at 3-cm stubble height generally reduced yields. After 2 years, stands of AU Dewey, GA 1, Dawn and Norcen were reduced 59, 45, 24, and 15%, respectively, while Fergus was unaffected. The AU Dewey and GA 1 entries require a higher stubble or regrowth periods longer than 21 days because of erect growth

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Publications

- Alison, M. W. Jr. and C. S. Hoveland. 1989. Root and herbage growth response of birdsfoot trefoil entries to subsoil acidity. Agron. J. 81:677-680.
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