

Kudzu suppression by herbicides in two-year field trials

Mark A. Weaver¹, Margaret E. Lyn; C. Doug Boyette¹; Robert E. Hoagland¹
USDA ARS SWSRU¹ and BCPRU² Stoneville, MS USA



Introduction and Objectives

Kudzu is among the most important exotic invasive weeds in the southeastern USA. Herbicidal control of this perennial weed can require up to 10 years to achieve.

We have previously reported on the in-season efficacy of several selective kudzu herbicides, but it is known that regrowth occurs in the year following application.

This field study evaluated herbicides over two growing seasons at three locations for the control of kudzu.

Methods

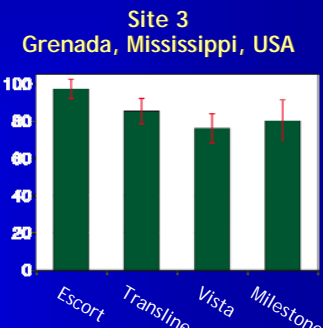
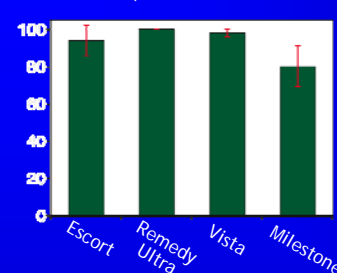
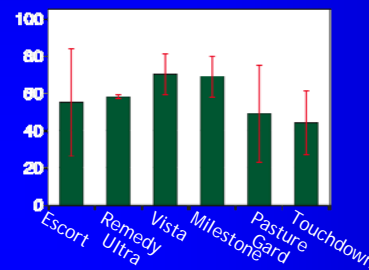
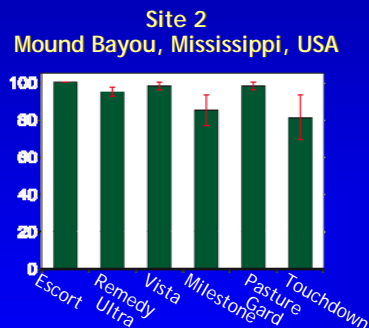
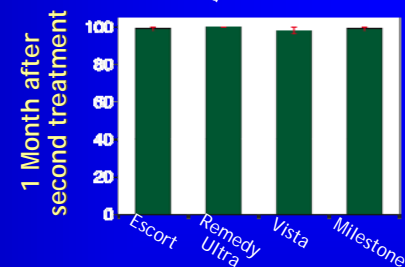
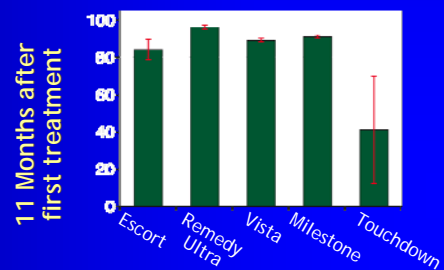
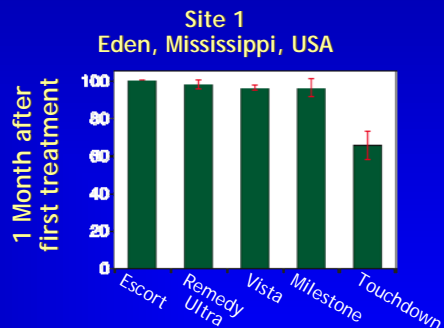
Field plots were established at 2 locations in 2007 and in a third location in 2008. Test locations spanned ca. 100 km in western Mississippi, USA.

Each plot was 200cm wide and 10 to 20m long. Plot boundaries were maintained by mowing 200cm buffers around each plot.

Herbicides were applied once per year at the maximum labeled rate in a volume of 374 L / ha.

Green kudzu was removed from 0.3m² subplots, dried and weighed to determine the level of control.

Kudzu Control in Field Trials



Test Plot Establishment

Conclusions

- A single application of Milestone, Vista, RemedyUltra or Escort provided ≥85% control in the first season at two or more study sites.
- Milestone and Vista provided ≥70% control 11 months after application at both sites. Escort, RemedyUltra, Vista and Milestone provided ≥90% control 11 months after application at one site.
- The probability of kudzu regrowth necessitates continuous monitoring and management.

Thanks to:

Laura Bennett, Carol Benson and Benjamin Maddox for technical assistance
Dow Agrosciences for providing herbicide samples

Mike Oliver and Sam Testa for assistance in finding suitable test sites

Holly Springs National Forest, Tra DuBois and Trent Lamastus for allowing experiments on their land.

Active Ingredient	Product name	Supplier	Mode of action	Max Use Rate	Application rate*
Glyphosate - diammonium salt	Touchdown®*	Syngenta	EPSP synthase inhibitor	9.34 L ha ⁻¹	2.5%
Aminopyralid	Milestone®	Dow AgroScience	Synthetic auxin	0.51 L ha ⁻¹	0.14%
Triclopyr	RemedyUltra	Dow AgroScience	Synthetic auxin	9.35 L ha ⁻¹	2.5%
Fluroxypyr	Vista®	Dow AgroScience	Synthetic auxin	3.12 L ha ⁻¹	0.8%
Clopyralid	Transline®	Dow AgroScience	Synthetic auxin	1.56 L ha ⁻¹	0.4%
Fluroxypyr	PastureGard®	Dow AgroScience	Synthetic auxin	9.35 L ha ⁻¹	2.5%
Metsulfuron methyl	Escort®	DuPont	Acetolactate synthase inhibitor	242 g ha ⁻¹	0.03%