Archival copy: for current recommendations see http://edis.ifas.ufl.edu or your local extension office.

UF UNIVERSITY of FLORIDA IFAS Extension

SS AGR 275

Control of Hard to Manage Weeds along Highway Rights-of-Way[1]

Jason Ferrell and Ken Langeland[2]

Table 1. Control of upland invasive weeds

Herbicide	Rate	Comments
	Cogongrass	
Glyphosate (Roundup Pro, etc)	4 to 8 pt/A or 3 to 5% solution	Cogongrass is most sensitive to glyphosate when applied in the fall. Spring applications are less effective. Mowing existing vegetation and treating the regrowth approximately 2 weeks later is often best. Multiple applications are often required before complete control is achieved.
Arsenal or Arsenal Powerline* BASF Corp	64 fl oz/A or 1% solution	Cogongrass is most sensitive to arsenal when applied in the fall. Spring applications are less effective. Mowing existing vegetation and treating the regrowth approximately 2 weeks later is often best. Arsenal is more effective on cogongrass than glyphosate, but expect total vegetation control and bare ground for 2 to 4 months after application. **DO NOT** apply Arsenal over the root zone of desirable hardwood trees. Multiple applications are often required before complete control is achieved.
	Tropical Soda Apple	
Garlon 4 Ultra	1 qt/A or 0.5% solution for spot application	A broadcast application of Garlon 4 is effective on TSA if applied near blooming or after regrowth from mowing. Applications made in late summer months or while fruiting are less effective. Garlon 4 has no soil residual activity and recolonization from seed is likely to occur after application. If spot-spraying, it is important to achieve full coverage. **The Organo-auxin rule must be obeyed when using this herbicide.**

1. This document is SS AGR 275, one of a series of the Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date September 2007. Revised November 2010. Visit the EDIS website at http://edis.ifas.ufl.edu.

2. Jason Ferrell, associate professor, Agronomy Department; Ken Langeland, professor, Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

The use of trade names in this publication is solely for the purpose of providing specific information. UF/IFAS does not guarantee or warranty the products named, and references to them in this publication does not signify our approval to the exclusion of other products of suitable composition. All chemicals should be used in accordance with directions on the manufacturer's label.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Millie Ferrer-Chancy, Interim Dean

Archival copy: for current recommendations see http://edis.ifas.ufl.edu or your local extension office.

Herbicide	Rate	Comments
Milestone VM	5 to 7 fl. oz/A or 0.1% solution for spot application	A broadcast application of Milestone VM is effective on TSA at any growth stage or time of year. Mowing is not necessary to improve control. Milestone VM has significant soil residual activity and control of seedlings is likely to occur for over 6 months after application. If spot-spraying, it is important to achieve full coverage. **The Organo-auxin rule must be obeyed when using this herbicide.**
Brazilian Pepper or Chinese Tallow		
Garlon 4	10%-25% diluted in oil	Basal bark or cut-stump application, rate will depend on applicator technique and site conditions, e.g. soil water content.
Pathfinder II or Remedy RTU	Undiluted	Basal bark application
Garlon 3A	50 - 100%	Cut stump application. Apply herbicide immediately after felling.
Garlon 3A	0.50-1.5%	Brazilian pepper only. Foliar application. Use sufficient volume to ensure thorough coverage.
Escort XP	1-2 oz/acre	
Kudzu		
Escort XP*	3-4 oz/A	Apply Escort XP when kudzu is actively growing for optimum control. Several hardwood species are sensitive to Escort XP at these rates, so do not use for kudzu control if application to desirable hardwoods can't be avoided.
Milestone VM	7 oz/A	Milestone VM is effective on kudzu and many other legume species (including mimosa and lead trees). One application will rarely control old-growth kudzu, but Milestone VM is safe on most hardwood species.
Transline*†	5 to 21 fl oz/A	Transline should be applied from late summer through fall for optimum control. For small populations that are not well established, lower application rates are acceptable. For larger, more mature stands, the maximum application rate should be used. Transline is safer on hardwood species than Escort XP. Mature stands of kudzu will require multiple applications of transline. Transline is only labeled for use in select counties in North Florida. See product label for specifics. **The Organo-auxin rule must be obeyed when using this herbicide.**
Air Potato		
Glyphosate (Roundup Pro, etc)	1 – 2% solution	Glyphosate gives good control when applied late season, such as August-October. Early-season applications may require repeat treatments, and applications made after plants begin yellowing result in limited control. Desirable vegetation under air potato may not be damaged when lower rates of glyphosate are used. Removal of bulbils from the ground will aid long term control.
Climbing ferns – Lygodium		
Escort XP*	1 – 2 oz/A or 2 oz/100 gallon	Apply Escort XP or glyphosate to all live fronds for best results. Treatment of Lygodium often results in non-target damage due to the climbing nature of these species. In long-established stands of Lygodium, re-treatment will be required in < 6 months due to re-sprouts and new fern growth from spores. If not included in the product, an appropriate NIS surfactant at 0.5% v/v should be added to the herbicide solution. For fronds growing high in trees, cut at waist level and treat remaining rooted fronds.
Glyphosate (Rodeo, Roundup Pro, etc)	7.5 pints/A or 2% solution	

* denotes products not currently found on the DOT bid list.
† Transline is only labeled for use in specific counties in Florida.

Archival copy: for current recommendations see http://edis.ifas.ufl.edu or your local extension office.

Table 2. Aquatic Vegetation Control

Herbicide	Rate	Comments
Cattail		
Habitat* BASF Corp	32 fl oz/A Surfactant required: 0.5% v/v NIS or 1% v/v MSO	Apply to actively growing cattails in the spring, summer, or fall . **DO NOT** apply in the root zones of desirable hardwood vegetation. Do not apply to irrigation water The addition of an approved aquatic surfactant is required.
Clearcast* BASF Corp	64 fl oz/A Surfactant required: 0.5% v/v NIS or 1% v/v MSO	Apply to actively growing cattails in the spring, summer, or fall . Can be used in the root zones of desirable hardwood vegetation. Refer to current label for irrigation and watering restrictions. The addition of an approved aquatic surfactant is required.
Glyphosate (Rodeo, Accord Concentrate, etc.)	7.5 pt/A or 0.75 -1.5% solution	Fall applications are most effective. The addition of an approved aquatic surfactant is required.
Alligator weed		
Habitat* BASF Corp	32 fl oz/A Surfactant required: 0.5% v/v NIS or 1% v/v MSO	Apply to actively growing alligator weed in the spring, summer, or fall. **DO NOT** apply in the root zones of desirable hardwood vegetation. Do not apply to irrigation water
Clearcast* BASF Corp	64 fl oz/A Surfactant required: 0.5% v/v NIS or 1% v/v MSO	Apply to actively growing alligator weed in the spring. For summer and fall applications, add glyphosate 32 fl oz/A. Can be used in the root zones of desirable hardwood vegetation. Refer to current specimen label for irrigation and watering restrictions.
Glyphosate (Rodeo, etc)	0.75-1.5% solution	Repeat applications will be necessary. Addition of approved surfactant is necessary.
Renovate	3-8 qt/acre or .75-1.0% solution	Repeat treatments will be necessary, especially to floating mats. Additional surfactant may improve performance.
Water Hyacinth		
2,4-D amine*	2-4 qt per acre or 0.5-1.0% solution	Refer to specific product label to ensure that the 2,4-D brand used is labeled for aquatic weed control. Refer to label for water use restrictions.
Reward	0.5-2.0 gal/acre or 0.5% solution	Addition of an approved surfactant is essential. Refer to label for water use restrictions.
Glyphosate (Rodeo, etc)	5-6 pints per acre or 0.75-1.0% solution	Addition of an approved surfactant is essential. Refer to label for water use restrictions. Visual symptom are not observed until over three weeks after application.
Water Lettuce		
Reward	0.5-1.0 gal/acre or 0.5 to 1.0% solution	Addition of an approved surfactant is essential.
Stingray	3.4-13.5 oz/acre	Addition of an approved surfactant is necessary.
Torpedograss		
Glyphosate (Rodeo, etc.)	2-3% solution	Torpedograss control will be improved when maximum leaf surface is exposed above the water line. Regardless of herbicide or application rate, multiple applications will be required for complete control. The addition of an approved aquatic surfactant is required.
Habitat	1% solution	

* denotes products not currently found on the DOT bid list.

† Transline is only labeled for use in specific counties in Florida.