

Wise Use of Triazines in EAA



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Commonly used herbicides

PRE	POST
Atrazine	2,4-D
Metribuzin	Ametryn
Pendimethalin	Asulam
	Atrazine
	Dicamba
	Halosulfuron
	Mesotrione
	Metribuzin
	Trifloxysulfuron

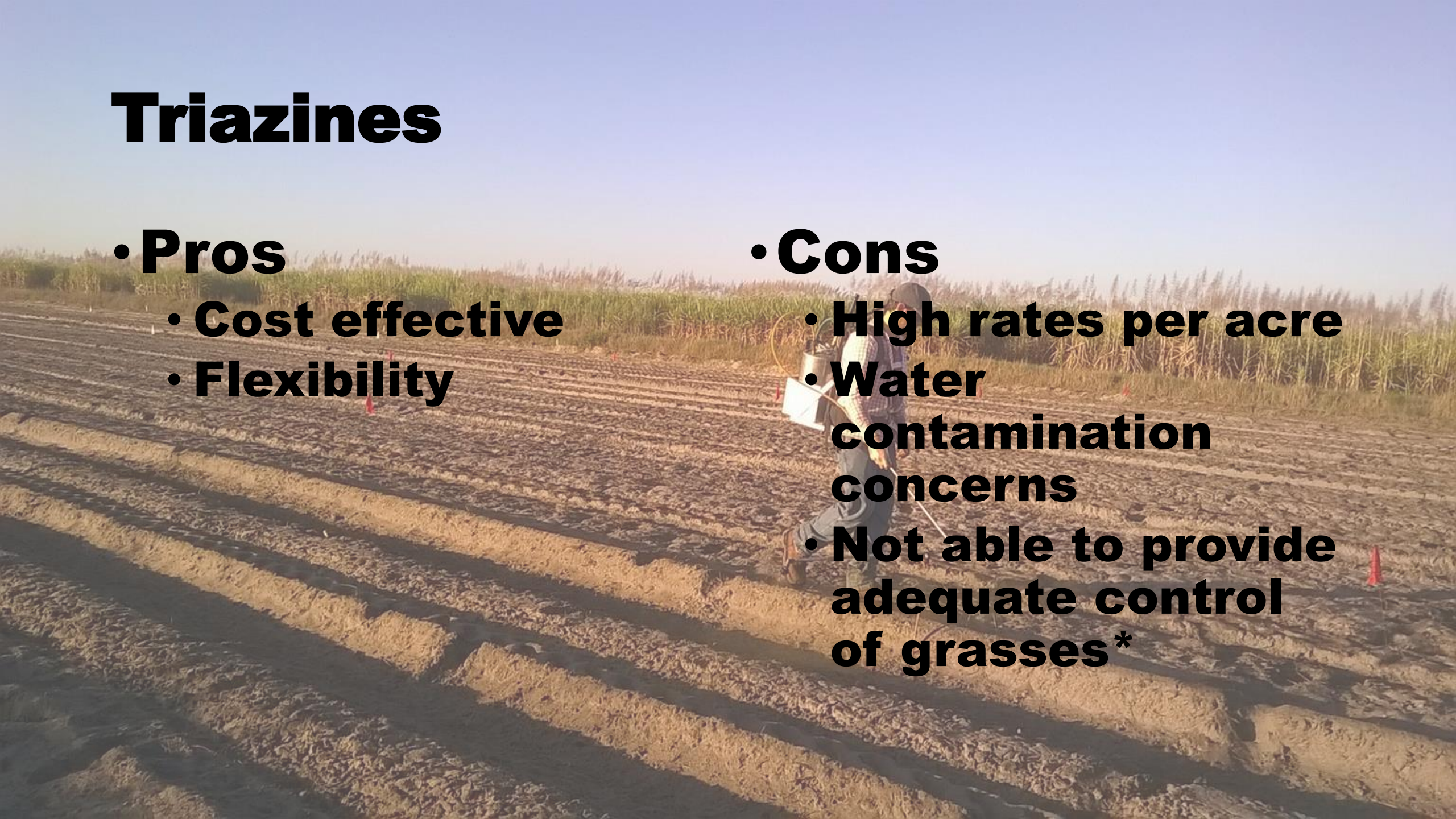
Triazines

• Pros

- Cost effective
- Flexibility

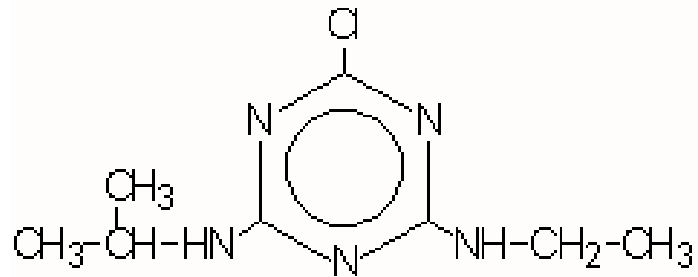
• Cons

- High rates per acre
- Water contamination concerns
- Not able to provide adequate control of grasses*

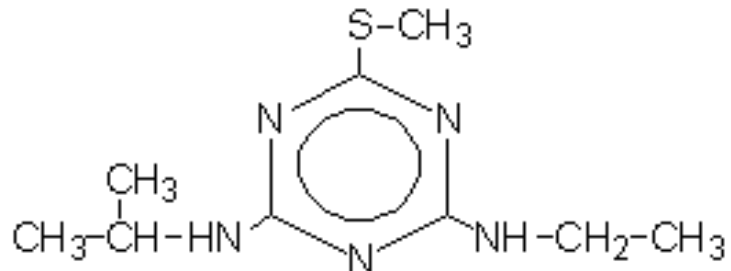


Comparison

	Atrazine	Ametryn	Metribuzin
Solubility mg/L	33	200	1100
K_{oc} mL/g	100	300	60
Half life (days)	10		25



Atrazine



Ametryn

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Field Dissipation of Atrazine and Metribuzin in Organic Soils in Florida

Dennis C. Odera and Dale L. Shaner*

Sugarcane growers have observed reduced residual activity of atrazine on organic soils in the Everglades Agricultural Area (EAA) of south Florida. Field studies were conducted between 2011 and 2012 to determine the rate of dissipation of atrazine at 2.24, 4.48, and 8.96 kg ha⁻¹ and metribuzin at 0.56, 1.12, and 2.24 kg ha⁻¹ in the top 10 cm of soil in sugarcane fields in the EAA. The bioavailable fraction of atrazine dissipated more rapidly than the total amount of atrazine in the soil. Half-lives of the total and bioavailable fraction of atrazine ranged between 3.9 to 12.1 d and 1.0 to 7.5 d, respectively. Metribuzin dissipated much more slowly than atrazine on organic soils. Similarly,

SUGARCANE

(Florida Only)

Post-emergence over-the-top or directed spray applications of TriCor 4F are recommended for the control of the following weeds in sugarcane in Florida.

Broadleaves	Grasses
Amaranth, Spiny (seedling) (<i>Amaranthus spinosus</i>) Butterweed (Cressleaf groundsel) (<i>Senecio glabellus</i>) Cudweed (<i>Gnaphalium spp.</i>) Purslane (<i>Portulaca oleracea</i>)	Crabgrass, large (<i>Digitaria sanguinalis</i>)* Foxtail, bristlegrass (<i>Setaria magna</i>) Goosegrass (<i>Eleusine indica</i>) Panicum, broadleaf (<i>Panicum adspersum</i>) Signalgrass, Broadleaf (<i>Brachiaria platyphylla</i>)
* Best control is achieved when applications are made when this weed is less than 4" in diameter.	

APPLICATIONS – SUGARCANE – FLORIDA ONLY

TriCor 4F (Pt./Acre)	REMARKS
2 to 4	GROUND APPLICATION: TriCor 4F may be used in one or two applications with a minimum of 14 days between each application. Apply when weeds are less than 6 inches tall in 10 to 40 gallons of spray mixture per acre. POST-EMERGENCE BROADCAST OR BAND: Apply over the top of stubble or plant cane while sugarcane is less than 14 inches tall. POST-EMERGENCE DIRECTED SPRAY: Apply to sugarcane that is a minimum of 14 inches tall and before row closing.
2 to 3	AERIAL APPLICATION: Apply when weeds are less than 4 inches tall in 5 to 10 gallons of spray mixture per acre. Apply to stubble or plant cane while the sugarcane is less than 14 inches tall.

TriCor 4F PLUS Atrazine TANK MIX: TriCor 4F may be used with atrazine as a pre-emergence or post-emergence (before row closing) application to sugarcane. Rates for TriCor 4F are 1-1/2 to 4 pts./acre and atrazine 80% WP (4L) are 2-1/2 to 5 lbs./acre (2 to 4 qts./acre). For additional information on precautions, instructions, limitations, application, and weeds controlled, refer to this label and the atrazine label.

RESTRICTIONS (Florida Only): Do not use more than 4 pts. per acre in a single growing season. Do not use on sand soils. Spray contact with sugarcane foliage may result in minor leaf margin chlorosis and/or necrosis.

Do not apply within 60 days of harvest. Do not use treated crop for feed or forage. Avoid spray overlaps or variations in application speed that may result in insufficient or excessive rates of application.

To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply this product by aircraft at a minimum upwind distance of 400 ft. from sensitive plants.

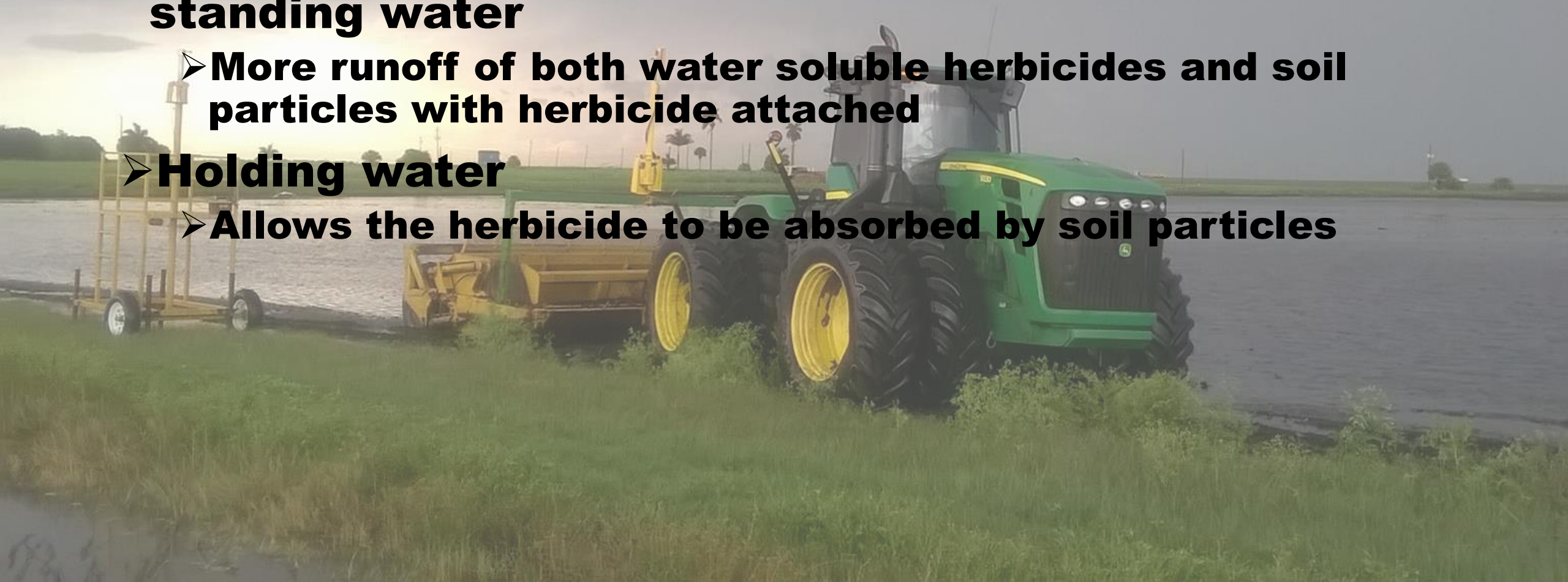
Setback requirements

- **DO NOT mix/load within 50 ft of any well, sinkhole, stream, river, or lake**
- **DO NOT apply within 66 ft of where field runoff enters a stream or river**
- **DO NOT apply within 200 ft of any lake or reservoir**



Minimize triazine herbicides in our surface waters

- **Do not apply to saturated soils or fields with standing water**
 - **More runoff of both water soluble herbicides and soil particles with herbicide attached**
- **Holding water**
 - **Allows the herbicide to be absorbed by soil particles**



Weed Management in Sugarcane¹

D. C. Odero and J. A. Dusky²

Successful weed control is essential for economical sugarcane production in Florida. Weeds can reduce sugarcane yields by competing for moisture, nutrients, and light during the growing season. Several weed species also serve as alternate hosts for disease and insect pests. Weed control is most critical early in the season prior to sugarcane canopy closure over the row middles. Heavy weed infestations can also interfere with sugarcane harvest by adding unnecessary harvesting expenses. A weed that is allowed to mature and

produce seed will multiply weed control problems by being a source of seed bank replenishment and re-infestation in subsequent years. See [Table 1](#) for available herbicidal options.

Crop Rotation

Crop rotation patterns will affect weed management of a sugarcane crop. Weed management must be intensified particularly in successive planting operations. Traditionally, the fallow period between final ratoon harvest and planting has effectively been used to manage troublesome perennial weeds such as Bermudagrass. This is accomplished primarily by a combination of mechanical cultivation and herbicide application. Flooding fallow fields also aids in weed control through the development of an anaerobic environment in which weed seed germination and seedling growth is inhibited. Under successive planting manage-

