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Florida's Organo-Auxin Herbicide Rule—2021[1]

B. Bultemeier, J. A. Ferrell, and G. E. MacDonald[2]

Organo-auxin (phenoxy) herbicides were first developed during the 1940s and have been used extensively in the United States since then. This group of chemicals has found a place in weed control schemes for peanut, corn, small grains, sugarcane, turf, pasture and forage crops, and many other areas. On a worldwide basis more phenoxy herbicides are used than any other class of herbicides presently manufactured. The phenoxy herbicide group's unique ability to remove broadleaf weeds from grass crops has been exploited for successful weed control in many areas.

Organo-auxin herbicides have been formulated in a number of ways with each formulation possessing certain characteristics. Amine and ester formulations have been the most popular although other forms of phenoxys do exist. As a general rule, ester formulations are more active than amines. This difference in control/activity has made ester formulations very popular due to the fact that about one half the rate of the amine formulation could be used and achieve the same weed control level. Therefore, growers could buy less total herbicide in the ester form to do the same job as a larger amount of a phenoxy in the amine form.

Although ester formulations are more active herbicidally than amine formulations, they do have serious drawbacks associated with their use. Specifically, ester formulations are typically very volatile and possess the ability to move away from the target site up to several days after the initial herbicide application has been made. Volatilization problems have led to the complete destruction of nearby sensitive crops if weather conditions were favorable for volatilization to occur. Sub-lethal doses of organo-auxin herbicides cause very visual effects, indicative of hormonal action (Figures 1–4). Due to volatilization problems, many states have totally banned the use of high-volatile ester formulations and discouraged use of lower volatile esters in sensitive areas. Florida is one such state with these regulations. Due largely to phenoxy herbicide applications in south Florida on sugarcane and drift or volatilization to nearby tomato crops and their subsequent destruction, the Florida Department of Agriculture and Consumer Services (FDACS) enacted the Organo-Auxin Herbicide Rule (Table 1). This rule applies to the application of organo-auxin herbicides anywhere within the state. It is the intent of this publication to clarify and disseminate the Florida Organo-Auxin Herbicide Rule to interested growers and applicators.

A suggested recordkeeping form developed by FDACS is available for applicators of organo-auxin herbicides to record their data. Although this specific form is not required, it does contain spaces for providing the required data to be recorded (Figure 5).

1. This document is SS-AGR-12, one of a series of the Agronomy Department, UF/IFAS Extension. Revised January 1996, April 2003, April 2004, November 2005, November 2006, June 2007, May 2009, February 2015, February 2018, and December 2021. Visit the EDIS website at https://edis.ifas.ufl.edu for the currently supported version of this publication.

2. Brett Bultemeier, Extension assistant professor, Pesticide Information Office; J. A. Ferrell, professor, Agronomy Department, and director, Pesticide Information Office; and G. E. MacDonald, professor, Agronomy Department; UF/IFAS Extension, Gainesville, FL 32611.

Figure 1. Organo-auxin herbicide drift symptoms on sensitive plants.

Figure 2. Organo-auxin herbicide drift symptoms on sensitive plants.

Figure 3. Organo-auxin herbicide drift symptoms on sensitive plants.

Figure 4. Organo-auxin herbicide drift symptoms on sensitive plants.

Florida Department of Agriculture & Consumer Services
Division of Agricultural Environmental Services

SUGGESTED PESTICIDE RECORDKEEPING FORM for Organo-Auxin Herbicides

Chapter 487.051(1)(b), F.S. and 5E-2.035, F.A.C.

This is a suggested format for recording the information required for application of organo-auxin herbicides and plant growth regulators (general or restricted use) to a land or surface area greater than 5 cumulative acres with a 24-hour period. For a land or surface area less than 5 cumulative acres within a 24-hour period, only wind speed and direction readings are required.

Date_____ Time Began _____ Time Ended _____

Licensed Applicator _____ License No. _____

Person making application (if not licensed) _____

Property owner or person authorizing treatment _____

Location of treatment area: County _____ Field _____

Site Address _____

Location of mixing/loading site _____

Crop or site treated _____ Acres treated _____

Brand name of product applied _____

Amount of product applied per acre _____ Active Ingredient per acre _____

Nozzle type _____

Gallons per minute _____ Angle of spray (if applicable) _____

WIND SPEED AND DIRECTION - Record hourly during application

Wind Speed (3 readings within 5 minutes)

Time	1	2	3	4	Average	Wind Direction

Figure 5. Suggested form for recording organo-auxin application data.

The Florida Organo-Auxin Herbicide rule 5E-2.033 appears in the Florida Pesticide Law and Rules. All inquiries should be addressed to:

Bureau of Inspection and Incident Response
Division of Agricultural Environmental Services
Florida Department of Agriculture and Consumer Services
3125 Conner Boulevard, Ste. N
Tallahassee, FL 32399-1650
Phone: 850-617-7996
Fax: 850-617-7981

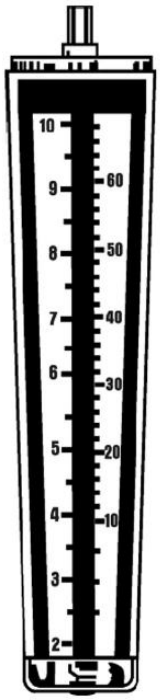

Figure 6. Wind meter

Table 1. Florida organo-auxin herbicide rule No. 5E-2.033 organo-auxin herbicides.

Restrictions and Prohibitions	
1.	Synthetic organo-auxin herbicides: The Synthetic organo-auxin herbicides are defined as herbicides which produce hormonal auxin type effects on plants similar to the effects of 2,4-D. These herbicides include:
	(a) 2,4-D,
	(b) MCPA,
	(c) 2,4-DP, Dichloroprop,
	(d) Mecoprop,
	(e) Dicamba,
	(f) Triclopyr,
	(g) 2,4-DB,
	(h) Clopyralid,
	(i) Fluroxypyr,
	(j) Aminopyralid,
	(k) Aminocyclopyrachlor,
	(l) Quinclorac,
	(m) Diflufenzopyr,
	(n) Florpyrauxifen-benzyl,
	(o) Picloram.
2.	Sale and use of highly volatile forms of organo-auxin herbicides in the state is prohibited except for those products labeled for use as plant growth regulators on citrus. Highly volatile organo-auxin herbicides include the isopropyl and butyl esters of 2,4-D.
3.	Based upon the wind speed and direction at the time of application, the distance which must separate the closest edge of the area to be sprayed from susceptible crops is listed below. Susceptible crops are defined as commercially produced plants or crops that may be damaged when exposed to low concentrations of organo-auxin herbicides. Examples of susceptible crops are tomatoes, peppers, watermelons, eggplants and ornamental broadleaf plants. Users of organo-auxin products on citrus as plant growth regulators are exempt from the wind speed restrictions below provided they adhere to the restrictions appearing on the product label.

	Wind Speed	Aerial Equipment	Ground Equipment
	0–3 mph	½ mile downwind	⅛ mile downwind
		½ mile crosswind	⅛ mile crosswind
		50 feet upwind	20 feet upwind
	3–6 mph	1 mile downwind	¼ mile downwind
		½ mile crosswind	⅛ mile crosswind
		50 feet upwind	5 feet upwind
	6–10 mph	2 miles downwind	½ mile downwind
		½ mile crosswind	¼ mile crosswind
		50 feet upwind	5 feet upwind
	Above 10 mph	Prohibited	Prohibited

Note: "Crosswind" means wind from a direction 90 degrees (+/-10 degrees) to a line drawn between the proposed treatment site and a susceptible commercial crop site.

4.	Wind speed will be measured at the treatment site. Wind speed measurements will be taken at spray boom height for ground application and at least six feet above the ground for aerial and airblast applications. The measurement site will be located so that structures, plants, or terrain features do not interfere with the accuracy of the reading. Wind direction will be estimated as accurately as possible by the person taking the wind speed readings. The applicator or his representative shall take and record wind speed and direction readings before spraying starts and once every hour during the spraying operation. A reading shall consist of an average of three measurements taken within a five-minute period. These measurements shall be taken by rotating and positioning the anemometer into the wind in such a manner so as to obtain the maximum wind velocity measurement, which will be used to calculate the average reading.	
5.	Applicators should use appropriate spray nozzles and pressure to minimize the production of droplets with mean volume diameter less than 200 microns. Applications of organo-auxin herbicides on citrus as a plant growth regulator utilizing airblast sprayers are exempt from the requirements of this section.	
6.	Persons making spray applications of organo-auxin herbicides or plant growth regulators to cumulative land or water surface areas exceeding 5 acres per 24-hour period, shall maintain the following records for two years:	
	a.	Name and address of the owner, lessee or tenant in control of the land and the name and address of the applicator.
	b.	Location of the site to be treated, location of the mixing and loading area and a description of application equipment used.
	c.	Date and time of application.
	d.	Trade name, manufacturer, formulation, total amount of product to be applied per acre and the amount of active ingredient of the product applied per acre.
	e.	Total acreage and crop or site treated.
	f.	Average hourly wind speed and direction.
	g.	Nozzle type including gallons per minute rating at specified pressure and angle of spray emission if applicable.
7.	Aerial application of organo-auxin herbicides by fixed wing aircraft from January 1 until May 1 of each year in Hendry, Palm Beach, Glades or Martin counties is prohibited. The use of rotary wing aircraft using Microfoil spray booms or their equivalent for right-of-way and aquatic spray applications is allowed provided the terms of subsections (2), (3), (4), (5), and (6) are met.	
8.	Applicators who apply organo-auxin herbicides to aquatic sites will assure that labeled directions are followed if water is used for irrigation.	
9.	The ground application of low volatility 2,4-D products registered in the State of Florida for use as a growth regulator on red potatoes in small dosages substantially less than for herbicidal use is not subject to the use regulations and restrictions set forth in subsections (3) and (4) of this rule, provided the product is not applied within 50 feet of susceptible crops, the spray boom height does not exceed 18 inches above the crop canopy and label instructions are followed.	
10.	The following application methods are exempt from the abovementioned requirements:	
	a.	Cut stump, basal bark, hack and squirt or frill and girdle applications.
	b.	Granular formulation applications.
	c.	Subsurface aquatic applications.
	Rulemaking Authority 570.07(23) FS. Law Implemented 487.031(10), (13)(e) FS. History–New 2-4-86, Amended 7-10-89, 7-29-04, 9-30-21.	