

Specifically Regulated Pesticides in Florida -- Aldicarb¹

Frederick M. Fishel²

Certain individual pesticides or groups of pesticides have specific regulations that pertain to them. The Florida Department of Agriculture and Consumer Services (FDACS) is the agency responsible for determining these regulations under Chapter 5E-2, Florida Administrative Code - "Pesticides." This guide will explain special regulations governing the use of aldicarb in Florida.

Aldicarb, a member of the carbamate family of insecticides, was introduced by the Union Carbide Company in 1965. It is state and federally classified as a "restricted use" pesticide and in Florida is marketed under the trade name, Temik[®] (Figure 1). The current manufacturer and registrant is Bayer CropScience. Labeled sites in Florida include citrus, pecan, potato, dry bean, cotton, peanut, sorghum, and soybean. Pests controlled include citrus nematode and several species of mites and insects. The available formulation is a granule labeled for soil application only.

Aldicarb is a carbamate. The mode of action of carbamates targets the cholinesterase enzyme, affecting nerve impulse transmission. It is soluble in

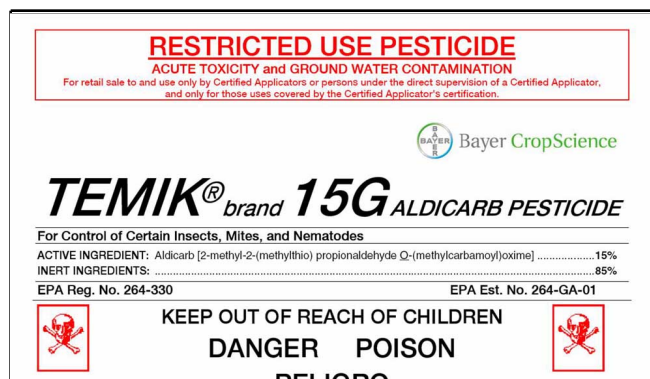


Figure 1. Aldicarb is sold by the trade name of Temik[®].

water and is readily absorbed into the roots and is transported throughout the plant. There are indications that aldicarb can be highly mobile in certain soil types, such as those with relatively high sand content and little organic matter, and its detection in groundwater demonstrates that leaching can occur. Aldicarb has high acute toxicity and carries the signal word, "DANGER POISON" on its label. Acute toxicity and groundwater contamination concerns are the criteria for its restricted use classification. Highly publicized incidents involving contaminated cucumbers and watermelons occurred

1. This document is PI-74, one of a series of the Pesticide Information Office, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date October, 2005. Revised November 2006. Reviewed November 2009. Visit the EDIS Web Site at <http://edis.ifas.ufl.edu>.

2. Frederick M. Fishel, Associate Professor, Agronomy Department, and Director, Pesticide Information Office; 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. Use pesticides safely. Read and follow 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

in the mid 1980s. In those cases, misapplication led to adverse effects in people.

Aldicarb has raised environmental and regulatory concerns because of the previously mentioned factors and the use patterns. FDACS has taken regulatory action involving aldicarb's use and sale. The following restrictions apply:

- Anyone who applies aldicarb in Florida is required to obtain a permit from FDACS for each application to be made. The aldicarb application may be made as soon as the permit has been approved. An exception is the application period to citrus is limited to the period November 15 – April 30.
- Aldicarb may only be applied during the time period for which written or electronic authorization is issued by FDACS. For citrus, applications are allowed only between November 15 and April 30, so permits received outside this period will be approved to start the following November. The maximum time period for approved application to citrus is 5 1/2 months (November 15 - April 30). Permits for application to crops other than citrus are approved for 6-month periods and may be issued at any time of year. Applications may only be applied at approved, permitted sites.
- Effectively July 1, 2007, drinking wells inside an application site or within the appropriate buffer zone (300 or 1,000 feet) around an application site must be identified with Global Positioning System (GPS) latitude and longitude coordinates in decimal degrees. Latitude and longitude coordinates must be accurate to at least five decimal places. Applicators are encouraged to begin reporting GPS coordinates as soon as possible. If GPS coordinates are provided, a verbal description of the well location is not necessary but may be provided if desired.
- Effective July 1, 2007, application sites for all crops to which aldicarb are applied must be identified to the 1/4 of 1/4 section. This is in addition to the following information which must still be provided for each application site: county, township, range, section, and site/block name or description. Paper forms have been

modified to accommodate the change and applicators are encouraged to provide such section information as soon as possible.

- Effective July 1, 2007, in order to reduce the buffer zone around cased drinking wells from 1,000 feet to 300 feet, cased well documentation must contain all of the following information:
 - well location,
 - casing depth,
 - static water level at time of well completion (if not continuously cased to a depth of 100 feet or greater), and
 - name of the water management district of Florida-Licensed well contractor that issued the document.

Well location must be identified by county, range, township, and section; and, effective July 1, 2007, GPS latitude and longitude coordinates in decimal degrees to five decimal places are to be used.

- The rule states that well location must be provided only for drinking wells that determine application setbacks based on the 300-foot and 1,000-foot setback requirements. The number of non-drinking wells within the application site must still be reported, but no well location information needs to be reported for non-drinking wells, provided they are posted with a conspicuous warning notice stating “NOT FOR HUMAN CONSUMPTION.”
- Citrus grove use is limited to one application per year during the above period.
- The maximum allowable application rate is 5 pounds active ingredient or 33 pounds of the 15 G formulation per acre.
- Sales documents from any person selling or distributing aldicarb in Florida must state: "For use only as authorized by Rule 5E-2.028, F.A.C."

Procedures for Obtaining a Temik[®] Permit

Applications may be submitted electronically or by U.S. mail. To file a permit electronically, an individual must first obtain a username and password. To obtain a username and password, go to <http://www.flaes.org/temik/index.html#obtainingtemikpermit> and print out a Request for Username & Password for Electronic Temik[®] Permit Application. Once filled out, this should then be mailed or faxed to the Pesticide Certification Section as directed on the form. A username and password will be emailed to the requestor along with instructions for using the online Temik[®] permit system. Users may change their password at any time after the initial login. Users may then access the online Temik[®] permit system at <http://www.flaes.org/temik>. Approvals for permit applications submitted electronically are made online, and individuals can check the status of their permit applications by logging into the online system. No paper permits or correspondence are mailed out unless requested.

Individuals who prefer to file a paper permit application should print out an Application for Permit to Apply Aldicarb (Temik[®]) found at <http://www.flaes.org/temik/index.html#obtainingtemikpermit>. Paper application permits are generally processed within two days of receipt and approved permits are then mailed.

Recordkeeping Requirements for Temik[®] Permits

Individuals who obtain Temik[®] permits are required to keep the approved permit and any associated items, such as maps and well construction documentation, for two years. Permit records must be made available to authorized FDACS representatives upon request for review, photocopying, and/or photographing. Upon request for review by an authorized FDACS representative, individuals who have obtained electronic permits using the online system may either print out a copy of the permit from the web site or make the web site and permit screens available to the FDACS representative on computer.

Exemption for Research Purposes

Researchers who use Temik[®] for field research may be exempt from the 10-day waiting period prior to application if the following criteria have been met:

- The individual is properly licensed and has applied for a Temik permit;
- The individual has provided a signed statement confirming that the application is for research purposes; and
- The 10-day waiting period will be waived if all requirements are met, but a permit is still required.

Penalties

The use, sale, distribution, or application of aldicarb by any manner inconsistent with the provisions set forth by FDACS is in violation and subject to penalties. As with any pesticide, be sure to read and follow all label directions; the label is the law.

Additional Information

Fishel, F.M. 2005. Pesticide toxicity profile: carbamate pesticides. UF/IFAS EDIS Document PI-51. <http://edis.ifas.ufl.edu/PI088>.

Nesheim, O.N., F.M. Fishel and M.A. Mossler. 2005. Toxicity of Pesticides. UF/IFAS EDIS Document PI-13. <http://edis.ifas.ufl.edu/PI008>.

FDACS Pesticide Certification Section:

3125 Conner Blvd., Bldg. 8 (L-29)
Tallahassee, FL 32399-1650
(850) 488-3314 (telephone)
(850) 922-6961 (fax)
Email: braxtol@doacs.state.fl.us