

## Specifically Regulated Pesticides in Florida -- Aldicarb<sup>1</sup>

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*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<sup>®</sup>. 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 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 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. Permit applications must be submitted at least 10 days prior to application and the permit must be issued before the application is made.

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**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.**

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- Aldicarb may only be applied during the time period for which written authorization is issued by FDACS. For citrus, applications are allowed only between January 1 and April 30, so permits received outside this period will be approved to start the following January. The maximum time period for approved application to citrus is 4 months (January 1 - 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.
- Aldicarb application is not allowed within 300 feet of any well in the state unless:
  - The well is not used for human consumption;
  - The well has been posted with a conspicuous warning notice stating "NOT FOR HUMAN CONSUMPTION;" and
  - If the well is situated on property under different ownership from the property where the aldicarb application is to be made, a signed statement has been obtained from the well owner authorizing the posting of the warning notice specified above. Warning notices must remain in place after the application until sampling and analysis of the well water have been performed or approved by FDACS indicating aldicarb residue levels are in compliance with the standards set by the Florida Department of Environmental Protection (FDEP).

Aldicarb use is not allowed on Florida citrus within 1,000 feet of any well when any soil series within the intended site is identified by the U.S.D.A. Natural Resources Conservation Service (NRCS) as highly permeable well-drained sand, unless the applicator furnishes FDACS with construction documentation confirming that the well is properly cased to a depth of 100 feet below ground surface or a minimum of 30 feet below the water table. The documentation must consist of either a copy of the well completion report issued by the appropriate water management district or a statement certified as to accuracy by a licensed well contractor. The

1,000-foot setback requirements do not apply to those wells that meet the provisions listed above. Soil series which have been identified by the NRCS as highly permeable well-drained sand include, but are not limited to, the following:

Adamsville  
 Archbold  
 Astatula  
 Candler  
 Cassia  
 Lake  
 Neilhurst  
 Orsino  
 Palm Beach  
 Paola  
 Satellite  
 St. Lucie  
 Tavares

Specific information is available for soils present in each of Florida's counties at:  
[http://edis.ifas.ufl.edu/TOPIC\\_Soil\\_and\\_Water\\_by\\_County](http://edis.ifas.ufl.edu/TOPIC_Soil_and_Water_by_County).

- Any drinking water well found to contain aldicarb residues in excess of the FDEP standards will have further aldicarb use within 1,000 feet of the well suspended immediately. The suspension will remain in effect until the well has undergone remedial treatment in a manner acceptable to FDACS or until subsequent sampling and analyses of the well are performed or approved by FDACS indicate residue levels are in compliance with the FDEP standards.
- 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> permit system. Users may change their password at any time after the initial login. Users may then access the online Temik<sup>®</sup> permit system at <http://www.temikpermit.com/temikintent.htm>. 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<sup>®</sup>) 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<sup>®</sup> Permits

Individuals who obtain Temik<sup>®</sup> 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<sup>®</sup> 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

Brown, R.B. 2003. Soil texture. UF/IFAS EDIS Document SL-29. <http://edis.ifas.ufl.edu/SS169>.

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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>.

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