Aldicarb – Proposed Use on Citrus (Grapefruit and Oranges)
September 4, 2019

Background:

- Aldicarb is an N-methyl carbamate (NMC) insecticide registered for use to control certain insects, mites, and nematodes.
- Aldicarb products are restricted use pesticides (RUPs) due to acute oral, dermal and inhalation toxicity and to protect ground water.
- Aldicarb products are currently registered for use in agricultural areas on cotton, dry beans, peanuts, soybeans, sugar beets, and sweet potatoes. There are no registered residential uses of aldicarb.
- The use of aldicarb has declined since the 2010 voluntary phase-out decision by Bayer.
- Aldicarb Registration Review Interim Decision (ID) was signed 12/22/2017.

Current Action:

- AgLogic Chemical LLC submitted an application on April 9, 2019 for registration of new uses of citrus (grapefruit and oranges) in Florida and Texas. The PRIA due date for this submission is July 15, 2020.
- There is no tolerance petition associated with the action as tolerances are established for grapefruit and orange, sweet, a use supported by Bayer prior to its decision to voluntarily cancel these and other uses in 2010.
- Citrus pests listed on the proposed label include Asian ~~citrus~~citrus psyllid (responsible for transmission of citrus greening); mites; aphids; whiteflies; and nematodes.

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Benefits:

- Aldicarb is a pesticide with high value to growers because it controls a broad spectrum of pests and has a longer period of residual activity than most alternatives.
- Use of aldicarb tends to produce higher yields.
- Aldicarb is one of only four currently registered, non-fumigant nematicides.
- Aldicarb will provide another tool in the toolbox for growers to control Asian citrus psyllid.

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Alternatives:

- Florida Citrus Production Guide ([HYPERLINK "http://www.crec.ifas.ufl.edu/resources/production-guide/"]) list the following 12 alternative insecticides as having good control for psyllid: beta-cyfluthrin, chlorpyrifos, cyantraniliprole, dimethoate, fenpropathrin, fenpyroximate, phosmet, spinetoram, spirotetramat, thiamethoxam, tolfenpyrad, zeta-cypermethrin. In addition, EPA recently approved sulfoxaflor for use on citrus.

Risks of Concern:

Acute Dietary Exposure (Not including proposed pending uses on domestically grown grapefruit and oranges):

Previous assessments completed for the ID:

- Food alone passes.

- A highly refined acute dietary (food only) exposure assessment was conducted for registration review. Refinements included the maximum percent crop treated (PCT) values of 20% for orange juice and 3% for oranges to account for possible residues of aldicarb that may be present in imported commodities. Estimated acute dietary exposure is **74%** of the aPAD (acute population-adjusted dose) for the highest exposed population subgroup, children 1-2 years old.
    - Chronic dietary assessment not conducted since longer-term exposures are considered a series of acute exposures.

Drinking Water:

- Water alone exceeds the agency's level of concern (LOC).
- Previously, acute dietary exposure estimates for drinking water alone ranged from **1,400% to 2,900%** and **150% to 340%** of the aPAD for the general population and most population subgroups using the scenarios that resulted in the highest estimated drinking water concentration (EDWC) (MN sugar beets) and the lowest EDWC (CA cotton), respectively.

Water Modeling for Proposed Citrus Uses:

- Preliminary modeling, based on the proposed label, indicate that the 1-day average EDWC is Ex. 5 Deliberative Process (DP) the DWLOC of Ex. 5 Deliberative Process (DP)

Soil Depth	1-day average EDWC (ppb)	DWLOC (0.87 ppb) as % of 1-day average EDWC
2 inches	Ex. 5 Deliberative Process (DP)	
3 inches		
6 inches		

Initial Conclusions:

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Additional Evaluation Areas:

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Next Steps:

- Aldicarb team is meeting on Thursday, 9/5/19, to discuss preliminary modeling and approaches for the development of initial risk assessments.

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