

CLASSIFICATION OF CERTAIN NITROGEN-BASED FERTILIZER COMPOUNDS USED POST-DORMANT FOR INFLUENCING BUD BREAK AS NON-PESTICIDES

Date established September 29, 2003

Enclosure to Enforcement letter ENF 03-33

Distribution County agricultural commissioners

Referral Questions concerning the implementation of this U.S. Environmental Protection Agency (U.S. EPA) decision can be directed to Mr. Barry Cortez, Chief, Registration Branch at (916) 445-4400 or directly to the U. S. Environmental Protection Agency. Enforcement related questions should be directed to your senior pesticide use specialist liaison.

Purpose This letter clarifies current Department of Pesticide Regulation (DPR) application of sections 12811, 12995, and other provisions of the Food and Agricultural Code to the use of certain nitrogen-based fertilizer compounds such as Calcium Ammonium Nitrate (CAN-17), Urea Ammonium Nitrogen (UAN), Calcium Nitrate, and other similar materials applied post-dormant to plants to influence bud break. DPR acknowledges the position taken by U.S. EPA and has little choice but to interpret state pesticide law in a manner consistent with U.S. EPA's position insofar as that is possible.

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Background

“Aqueous hydrogen cyanamide solution derived from calcium cyanamide and water” was registered in the 1980s as a plant growth regulator (PGR) at both the State and Federal levels for its desirable effect on bud break and it remains registered at the present time.

Subsequently, the agricultural industry found that other sources of nitrogen would provide similar beneficial effects when used in this manner on other crops, such as kiwis and cherries, in addition to grapes. In a letter to county agricultural commissioners (ENF 01-04), DPR clarified its position to include these other sources of nitrogen when used in this manner. DPR immediately began to work with the agricultural industry to facilitate their registration.

The registration package, including all of the required data, was submitted to U.S. EPA for registration. In response, U.S. EPA made the determination outlined above in an August 21, 2003, letter. U.S. EPA further notified the applicants that making claims of these nitrogen based fertilizer products as a PGR would be a violation of the Federal Insecticide, Fungicide, and Rodenticide Act.

U.S. EPA conclusion

When these nitrogen-based fertilizer compounds are applied directly to trees and vines during a post-dormant phase, or “quiescence,” the result is a uniform bud break, a physicochemical process caused by increased turgor pressures in tissues, provided necessary environmental conditions are present. None of these fertilizer compounds would cause a plant to break dormancy, a physiological process that responds to environmental stimuli and hormonal changes within the plant or to related chemicals known as PGRs. These nitrogen-based fertilizer compounds used post-dormant on trees, shrubs, and vines to ensure uniform bud break are not pesticides.

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U.S. EPA basis for conclusion

The U.S. EPA presented six points to justify their decision to classify these uses as non-pesticides:

1. The major factors controlling breaking of dormancy are photoperiod and temperature.
2. Typical application rates of nitrogen-based fertilizer compounds are greater than any plant hormone concentrations needed to evoke a plant response.
3. The time lapse between application and bud-break is too great to be considered a PGR effect.
4. There is no data to demonstrate that these nitrogen-based fertilizer compounds act by a mode of action similar to PGRs in the breaking of dormancy.
5. Bud break is not the signal of breaking of dormancy.
6. Nitrogen-based fertilizer compounds are common fertilizing materials.

DPR position

As a result of these actions, California agriculture can use these nitrogen-based fertilizer compounds that are registered as fertilizing materials with the California Department of Food and Agriculture (CDFA) during the post dormant season to enhance uniform bud break, provided the labeling or advertising does not include express pesticide (PGR) claims.

Regulating fertilizing materials

CDFA has regulatory authority over fertilizing materials sold in California. In order to be legally sold as a nitrogen-based fertilizer compound, the product must be registered as a fertilizing material with CDFA and the labeling and advertising must not include any specific PGR claims.
