



June 10, 2020

ENF 20-08

TO: County Agricultural Commissioners

SUBJECT: SULFUR BURNING FOR PEST CONTROL IN ENCLOSED SPACES

This is to clarify that burning sulfur to control pests in enclosed spaces is considered a pesticidal use requiring registration by U.S. Environmental Protection Agency (U.S. EPA) and the Department of Pesticide Regulation (DPR). There are currently no products registered for this type of use and therefore this method is considered use in conflict with the label. In addition, this method of application can be hazardous to workers.

Sulfur burning as a method of pest control

A current practice of controlling pests such as powdery mildew on some agricultural commodities in enclosed spaces (such as greenhouses or grow rooms) is to place sulfur on steam pipes or in heated devices, such as sulfur pots, sulfur evaporators, sulfur vaporizers, or sulfur burners. When heated, the sulfur can sublime or “vaporize” distributing sulfur throughout the enclosed space to control pests. This application method is a space treatment and has similarities to thermal fogging or other space fumigations.

Hazards

Both U.S. EPA and DPR have noted there are significant worker health and safety concerns with this application method. In addition to hazards of the sulfur suspended in the air, some of the vaporized sulfur may subsequently come in contact with the heating element and burn, or if the heating element is too hot or the sulfur too close to the element the sulfur may burn directly. Burning sulfur creates sulfur dioxide (SO₂). The SO₂ can mix with moisture to form an acid; breathing SO₂ can be harmful to humans.

Persons performing pest control using equipment which is unsafe, pest control not in a careful manner, or pest control which does not ensure proper application of the pesticide are potentially in violation of Title 3, California Code of Regulations (3 CCR) section 6600.

Currently registered products containing sulfur

There are about 80 DPR-registered pesticide products containing sulfur, 34 of which contain at least 80% sulfur. None of these are currently registered for this application method. See the enclosed 2018 National Pesticide Information Center fact sheet which states there are no U.S. EPA-approved sulfur products for use in plant fumigation.

Use in Conflict with Labeling

Food and Agricultural Code (FAC) section 12973 prohibits use in conflict with registered labeling. The 3 CCR section 6000 definition of “conflict with labeling” allows users to use a method of application not prohibited by the product labeling only if all other instructions can be followed. See ENF 20-07 letter for more information about use in conflict with labeling and FIFRA section 2(ee).

It is important to carefully review the **entire** product labeling (especially physical hazards, minimum dilution statements, use rate, and other instructions) as well as guidance in DPR Compendium Volumes to determine compliance with California pesticide laws and regulations.

The following are examples of circumstances where a registered sulfur product may be potentially used in conflict with labeling when applied by the method indicated above:

- Most registered sulfur products bear instructions to “Keep away from heat, sparks, or flames.” Heating sulfur in the manner described is in conflict with this mandatory statement.
- The label may state “Apply this product only as directed on this label.” If the labeling does not contain instructions to heat or burn sulfur this creates use in conflict.
- The intended use site (the crop being grown) must be listed under the heading “Directions For Use” or the use may be in conflict.
- The use rate and other instructions must be compatible with an enclosed space fumigation. Generally for foliar applications in enclosed spaces less than ½ acre you look for use rates per 1000 square feet. This does not convert to a volume rate (e.g. cubic feet) for a space fumigation.
- While many sulfur products are intended to be applied as a dust and have no minimum dilution, a product requiring dilution is not compatible with this method of application and creates the opportunity for use in conflict.
- Label instructions which instruct to use the product for foliar applications. Foliar applications must be directed at foliar surfaces only. As a space application, heating sulfur in the manner described could create a conflict with labeling.

Pesticide product sales and use

For commercial growing situations it is a violation of FAC section 12995 to possess and use unregistered materials intended for pest control purposes. An example of this is the use of elemental sulfur fertilizer “prills” or other forms of sulfur for this pesticidal use.

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In addition, persons performing pest control must comply with many other pesticide use and safety requirements found in California regulations including, but not limited to 3 CCR sections 6600 and 6614, as well as numerous pesticide employee safety requirements.

Commissioners should respond to such violations as they would with any other agricultural pesticide sales or use violation.

If you encounter elemental sulfur products, or other unregistered products, being sold with pesticidal claims or instructions for use as a pesticide, gather product photos, labeling, and any additional information you can obtain about how the product is marketed or presented to the grower. You can refer these product sales compliance (registration) issues to DPR for potential follow-up action with the manufacturer and/or distributor.

If you have any questions, please contact the Enforcement Branch Liaison assigned to your county.

Sincerely,

Original Signature by:

Donna Marciano
Chief, Enforcement Branch
916-324-4100

Enclosure

cc: Mr. Joe Marade, DPR Agricultural Commissioner Liaison

Enforcement Branch Liaisons