Operational Guidelines to Avoid Pesticide Related Bee Kills for Aerial Applicators and Beekeepers

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The following guidelines are the result of input from applicators, beekeepers, and the Colorado Department of Agriculture.

Responsibilities of Applicators:

1. Applicators should work with beekeepers to map the apiaries within their operating areas.
2. Applicators should attempt to contact the known beekeepers as soon as possible after being contracted to spray within one mile of an apiary. Notification should be attempted 48 hours prior if possible, but no less than 24 hours, prior to the application. Notification is most important when liquid insecticides are being applied, and it need not be given when granular formulations are being used.
3. When arranging a job, applicators should ask the farmer for the locations of any known nearby bee yards. *If grower knows beekeeper, ask for contact information to open dialogue and discuss application and pollinator protection options*
4. When treating near areas with apiaries, applicators should try to find a product that both the grower and beekeepers can agree has the best pollinator protections and select insecticides with low bee toxicity and use a surfactant if possible. When possible, use a product with a low extended residual insecticide (non-ERI) and make applications in the early morning or in the evening.
5. Applicators must follow product label directions and ensure all bee specific precautions are carefully considered to avoid harm or negative impacts to honeybees.
6. Applicators should circle the area being treated before spraying to check for bee yards.
7. Applicators should, whenever possible, time their spraying before 8:00 a.m. or after 6:00 p.m. when treating near apiaries. Use a non-ERI when possible.
8. Pesticide applications should never be made to blooming crops, unless allowed by the label, or applied in a manner that off-target movement occurs outside of the treatment area onto blooming crops or weeds. If an application to a blooming crop is allowed by the label (i.e.: crops always in bloom like sunflowers) then make applications in the early morning or late evening when honeybees are not actively foraging. Encourage growers to mow areas surrounding their fields with heavily blooming weedy borders. When these areas cannot be mowed, allow for additional buffers to avoid applications onto blooming weeds.
9. Applicators should cease applications, *modify the target area or change the application pattern* when bees are located downwind and weather conditions *are such as to create a scenario where off target movement* from the application site *is likely*.
10. Participate in the DriftWatch program or other means to facilitate communication between the grower, applicator and beekeeper.

Responsibilities of Beekeepers:

1. Beekeepers should clearly mark their hives with their name, address, and telephone number (and brand) in a font large enough to be seen from a distance (2 – 3 inch lettering) so applicators, crop advisors and farmers can alert the beekeeper of any impending application or when they are making plans for pesticide applications.

2. Beekeepers should attempt to site their hives for protection from possible pesticide exposures and for easier visibility from the air whenever possible.

3. Beekeepers should try to site their yards so they are not at intersections of several property owners; this leaves them open to exposure from the pesticides used by each of the farmers. If this is not possible, beekeepers should notify all adjoining property owners of location of their bee yards and need for caution.

4. Beekeepers should contact the area applicators and growers, identifying their apiary locations each year and/or whenever yard sites change so the applicator can alert the beekeeper on impending applications and allow for a dialogue to be opened to discuss what pesticide product options there may be to reduce or eliminate impacts to honeybees.

5. When at all possible, beekeepers should move, cover, or plug their hives when notified of spraying. When a beekeeper is unable to take these precautionary steps, communicate with the grower and applicator to facilitate communication to find alternative application times, lower toxicity products or methods to reduce or eliminate impacts to honeybees.

6. Beekeepers should learn about the pest control practices on the farms where their hives are located. Work cooperatively with the farmer and the farmer's applicator to insure that they are aware of hive locations and that notification of applications are communicated effectively.

7. If a beekeeper should experience bee mortality which they believe is pesticide related, they should inform the Department, grower and the applicator, if known, as soon as possible.

8. Beekeepers may want to consider placing wind socks in their bee yards, especially the more vulnerable sites.

9. Beekeepers should use caution and follow the label when using a pesticide to control insect pests such as ants and flies around beekeeping storage facilities or apiaries.

10. Beekeepers should use only EPA-registered products, registered for the use in and for the control of parasites and diseases in apiaries.

11. Participate in the DriftWatch program or other means to facilitate communication between the grower, applicator and beekeeper.