



Bee Kill Prevention for Tree Fruits

During 2002, WSDA investigated 12 honey bee kills in the Yakima and Wenatchee areas of central Washington. In most cases, the application of thiamethoxam to pear orchards appears to have been responsible for killing honey bees that are essential for pollination. WSDA would like to remind tree fruit growers that many insecticides commonly used in orchards are highly toxic to honey bees and have a residual hazard for several days. *This includes insecticides like thiamethoxam (Actara) and chlorpyrifos (Lorsban).* Do not apply these insecticides to blooming fruit trees, or allow them to drift onto blooming fruit trees or blooming broadleaf weeds.

To prevent bee kills, DO NOT apply these insecticides to blooming trees or broadleaf weeds.

Common Name (Formulation)	Trade Name	Length of Residual Hazard
azinphos-methyl (WP)	Guthion, Sniper	5 days
carbaryl (WP)	Sevin	3-7 days
chlorpyrifos	Lorsban	4-6 days
diazinon	several	2 days
dimethoate	several	3 days
malathion (ULV)	Fyfanon	5.5 days
methidathion	Supracide	1-3 days
phosmet	Imidan	3 days
thiamethoxam	Actara	7-14 days

Cool temperatures and higher insecticide use rates can greatly lengthen the residual hazard. *Spraying at night will not prevent a bee kill if the insecticide has a long residual hazard to bees.*

Controlling blooming broadleaf weeds (e.g. clover, dandelion) in orchards is an essential part of preventing bee kills. Weed bloom can be controlled by mowing, discing, flailing, or applying a labeled herbicide.

Proper timing can help to minimize the potential for bee kills if the insecticide has an intermediate or short residual hazard to bees. Insecticides with an intermediate residual hazard (e.g. carbaryl 4F or XLR, endosulfan, pyridaben) should only be applied to blooming trees between late evening (do not spray until temperature is below 55 degrees or until 7 PM) and midnight. Insecticides with a short residual hazard (e.g. acetamiprid, formetanate hydrochloride, spinosad) should only be applied to blooming trees between late evening and early morning (stop spraying at 7 AM). Refer to "Crop Protection Guide for Tree Fruits in Washington" (<http://cru.cahe.wsu.edu/CEPublications/eb0419/eb0419.pdf>) for more information.

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