

# Appendices

Table 47. Poisoning hazard to honey bees of common small fruit pesticides<sup>†</sup>.

Pesticide*	Duration of hazard to honeybees	Pesticide**	Duration of hazard to honeybees
<b>EXTREMELY TOXIC: DO NOT apply on blooming crops or weeds</b>			
*Agri-Mek EC (abamectin)	1 day	Imidan (phosmet)	1-4 days
Asana (esfenvalerate)	1 day	Lannate (methomyl)	> 1 day
*Brigade (bifenthrin)	> 1 day	Lorsban (chlorpyrifos)	4-6 days
*Danitol (fenpropathrin)	1 day	Malathion WP (malathion)	2 days
*Diazinon (diazinon)	2 days	Malathion Dust (malathion)	7 days
Guthion (azinphos methyl)	2.5 days	Sevin (carbaryl)	3-7 days
<b>HIGHLY TOXIC<sup>a</sup>: Apply ONLY during late evening if blooming plants are present.</b>			
Confirm (tebufenozide)	< 8 hours	Sevin XLR (carbaryl)	> 1 day
Dibrom EC (naled)	16 hours	Thiodan 50WP (endosulfan)- high rate	8 hours
Provado (imidachloprid)	< 8 hours	Phaser (edosulfan)	8 hours
<b>MODERATELY TOXIC<sup>a</sup>: Apply ONLY during late evening, night, or early morning if blooming plants are present.</b>			
Formula 40 (2,4-D)	?	Princep (simazine)	?
Azatin (azadiractin)	< 2 hours	Pyrenone (pyrethrin)	< 2 hours
Fusilade (fluazifop-P-butyl)	?	Pyrellin (pyrethrin/rotenone mix)	< 2 hours
Oil sprays (superior types)	< 3 hours	Rotenone (rotenone)	< 2 hours
Neemix (azadirachtin)	< 2 hours	Thiodan 50WP (endosulfan) - low rate	2-3 hours
<b>SLIGHTLY TOXIC OR NONTOXIC: Can be applied at any time with reasonable safety to bees.</b>			
Benlate (benomyl)		lime-sulfur	
Bordeaux mixture (copper sulfate + lime)		Microthiol (sulfur)	
Captan (captan)		M-Pede (insecticidal soap)	
Dipel ( <i>Bacillus thuringiensis</i> )		Nova (systhane)	
Dithane (mancozeb)		Procure (triflumizole)	
Ferbam (ferbam)		Roundup Ultra (glyphosate)	
fixed copper		Savey (hexythiazox)	
Goal (oxyflourfen)		Sinbar (terbacil)	
Gromoxone Max (paraquat)		Sulfur	
Javelin ( <i>B. thuringiensis</i> )		Syllit (dodine)	
Kelthane (dicofol)		Thiram (thiram)	
Kumulus (sulfur)		Vendex (hexakis)	

And most other fungicides and herbicides.

<sup>†</sup>Sources: 2003 New England Apple Pest Management Guide and 2003 PennState Commercial Berry Production and Pest Management Guide.

<sup>a</sup>Late evening means after 6-8 PM and assumes that evening temperatures are not unusually high and that bees have stopped foraging. Late evening, night or early mornings means after 6-8 PM, and before 4-7 AM, depending on temperature. Shift time if abnormally high temperatures cause bees to start foraging earlier or continue later than usual (5:30 AM to 8:00 PM). Few honeybees forage when springtime temperature is below 51½F. Maximum foraging activity occurs at temperatures above 63½F. Evening applications are generally less hazardous to bees than early morning applications.

\*\*Where trade names are used, no discrimination is intended and no endorsement by Cooperative Extension is implied. Not a complete list.

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