

## PROTECTION FOR NON-BEARING TREES

Young, non-bearing orchards need protection against apple scab, mites, apple aphids, certain leaf-feeding insects and in some instances other insects and diseases. This protection is needed to keep the foliage in optimum condition for good growth and bud development. Since young trees continue to grow until rather late in the season, early and continued protection of foliage can greatly increase the amount of new growth. In addition to better growth, protection of young plantings prevents the buildup of insect or disease reservoirs that can attack fruit after trees begin bearing.

The pesticide treatments listed below provide minimum disease protection for non-bearing trees and may have to be supplemented as conditions warrant. The insecticide treatments listed may not be needed. The decision to treat should be based on scouting observations.

Crown rot disease is discussed in Part I: *Other Apple Diseases*. Several insect borer species emerge during June, July or August, and sometimes cause problems. See Part I: *Insect and Mite Pests - Borers* for more information.

Time	Pest	Pesticide	Amt./100 gals.
When bearing trees are in Pink	Apple scab Chewing insects <sup>1</sup>	Scab fungicide Imidan 70 WP	See <i>Notes on fungicides</i> 3/4 lb.
Petal Fall	Apple scab White apple leafhopper	Scab fungicide See <i>Summer Cover</i> section below	See <i>Notes on Fungicides</i>
Summer Cover spray as needed	Apple aphid, Leafhoppers <sup>2</sup>  Japanese beetle, Buffalo treehopper <sup>3</sup>  Cutworms <sup>4</sup>  Borers <sup>5</sup> (trunk application)	Thiodan 50 WP or Provado 1.6 F or Sevin 50WP or Distance Sevin 50 WP  B.t. formulation or Thiodan 50 WP  Lorsban or Thiodan 50WP	1 lb. 1–2 ozs. 1 lb. 6-8 fl. ozs 1 lb.  see label 1 lb. 1.5 lb.
September	Borers – Check lower trunk bark for small holes exuding sawdust, and for sunken area indicating presence of borer larvae.		

1. Young gypsy moth caterpillars can be very destructive to recently planted trees, especially as the buds swell and open. Sevin is effective at this bud stage. When more foliage is open, a *Bacillus thuringiensis* insecticide can also provide control of gypsy moth larvae. Climbing cutworms may require control as early as green tip.
2. To forestall resistance, alternate Provado and Thiodan. Distance for aphid control only.
3. Buffalo treehopper can be a problem in weedy plantings or those near weedy fields. Weed control and winter pruning to remove branches with egg-laying scars are the best controls. If these are inadequate, spray groundcover in late June or July to kill nymphs.
4. Controlling broadleaf weeds around young trees reduces chance of cutworm damage.
5. Coarse spray to trunk for dogwood borer, apple bark borer, or roundheaded apple tree borer. For dogwood borer, one application to burr knots in mid-July to mid-August timed to coincide with peak egg hatch. With more severe pest pressure, use two applications, the first in early July and second in early August. For roundheaded apple tree borer, a late June–early July trunk application repeated in early August should suffice.