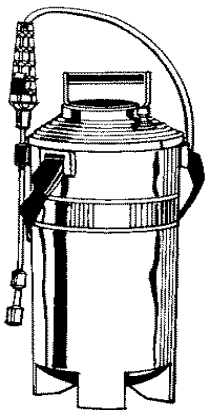


## Spraying the Home Orchard

Home fruit growing can be a fun and fascinating hobby but one which requires careful attention on the part of the grower to produce a reasonable yield of unblemished fruit. Fruit may be injured or even completely destroyed by insect and disease pests if these pests are not properly managed. Effective pest management in home orchards depends on recognizing the pest problem, selecting appropriate pesticides, timing applications properly, and thorough coverage of fruit and foliage with the spray.

### Spraying Equipment

The kind of spray equipment to use depends upon the size and number of trees to be sprayed. The sprayer must be capable of wetting the entire leaf canopy to the point of runoff. For spraying two or three trees under eight feet in height, an inexpensive, two-gallon hand pumped knapsack sprayer or slide pump sprayer would be better. For trees more than ten feet in height or large numbers of smaller trees, a power sprayer with a tank capacity of 10 to 30 gallons may be necessary. It pays to purchase a sprayer that is large enough to do the job quickly and easily.



Sprayers used for applying weed killers should *never* be used to apply fungicides and insecticides.

### Pesticide Materials

The pesticides recommended for use by home fruit growers have a relatively low toxicity to humans and pets. Never the less, they must be handled carefully. ***Read the label and follow all precautions and directions.*** Commercially prepared multi-purpose fruit spray mixtures are available and convenient to use. However, they generally are more expensive than the spray mixtures you prepare yourself. Refer to Tree Fruit Pest Management Fact Sheet for specific pesticide recommendations.

### Application and Timing

The early spray applications are timed according to the development of the fruit buds. The key bud stages are:

- ❑ **Dormant** - before buds begin to swell
- ❑ **Green tip** - buds open at tips, exposing green tissue
- ❑ **Half-inch green** – one-half inch of green tissue projecting from bud
- ❑ **Tight cluster** – blossom buds exposed, but tightly appressed, stems short
- ❑ **Pink** – all blossoms pink, stems fully extended
- ❑ **Bloom** – from the time the blossoms first open until the petal fall stage is reached (do not use insecticides during the bloom period)
- ❑ **Petal fall** – when three-fourths of the petals have fallen

The subsequent sprays, called cover sprays, are applied at ten-day intervals. Thoroughly spray the trunk, limbs, fruit and both sides of the leaves just to the point of runoff.

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Concentrate on spraying the top half of the tree and the lower half will usually be adequately covered. Sprays should be applied when there is little or no wind in order to assure thorough coverage and to minimize spray drift.

Proper pruning greatly facilitates spraying. Keep the tree short, well shaped and properly thinned. If you are planning new plantings, consider planting dwarf trees.

Sprays should not be applied during the rain or when rain is expected within a couple of hours. If heavy rain does occur shortly after spraying, the spray should be reapplied after the rain stops. Do not skip sprays. Keep in mind that insects and diseases do not take vacations.

<b>Approximate Amount of Spray Required to Wet a Fruit Tree to Runoff</b>		
	<i>Gallons per Tree</i>	
Height (feet)	Early Spring	Summer
4 - 6	$\frac{1}{4}$ - $\frac{1}{2}$	1 - $1\frac{1}{2}$
6 - 8	$\frac{1}{2}$ - 1	$1\frac{1}{2}$ - 2
8 - 10	1 - 2	2 - 3
10 - 15	2 - 3	3 - 5
15 - 20	3 - 5	5 - 10
20 - 25	5 - 10	10 - 15

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Every effort has been made to provide correct, complete, and up-to-date pest management information for New York State. Changes in pesticide regulations occur constantly, and human errors are still possible. These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide. Trade names used herein are for convenience only. No endorsement of products is intended, nor is criticism of unnamed products implied.

Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products is made or implied.

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