

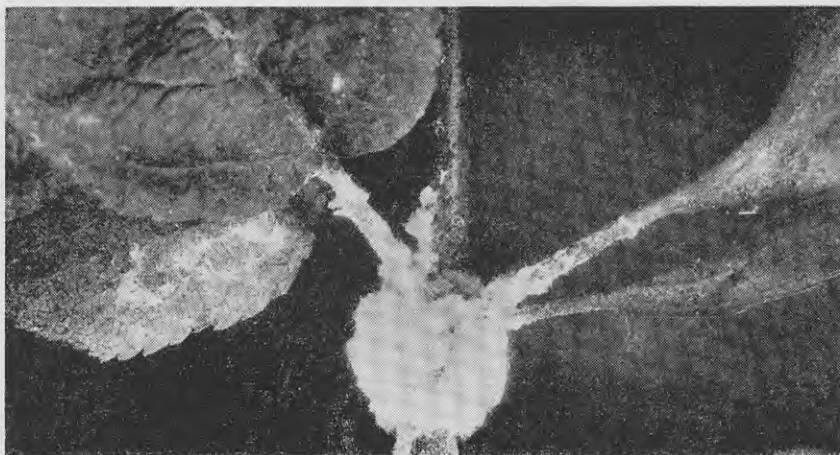
**Insect Pests**

It is important to inspect trees and berry canes periodically to check for insect pests. More than a casual glance is needed, and it will add interest to the job if the home orchardist owns a small hand lens. This can be obtained for a few shillings and is invaluable for detecting early outbreaks of red spider or the eggs of other insects.

The following descriptions of the main insect pests should help home orchardists to identify the various pests and thus to apply the effective sprays.

**Codling Moth**

The codling moth, a chewing insect, is the most troublesome with which home orchardists have to contend. This



Woolly aphid infection on an apple twig, showing the typical waxy threads secreted by the pest. [A Shell photograph]

**Sprays for Control of Insect Pests and Diseases in the Home Orchard**

**APPLES AND PEARS**

Time of application	Treatment	Pest or disease
Buds showing green tips	Bordeaux mixture (6oz. of copper sulphate and 5oz. of hydrated lime to 4 gallons of water) or lime sulphur (1½ pints to 4 gallons of water)	Black spot
Petal fall	*Lime sulphur and DDT (¼ pint of lime sulphur plus ½oz. of DDT 50 per cent. wettable powder to 4 gallons of water)	Black spot, powdery mildew, codling moth, bronze beetle
13 weeks later	†Lime sulphur and DDT (¼ pint of lime sulphur plus ½oz. of DDT 50 per cent. wettable powder to 4 gallons of water)	Black spot, powdery mildew, codling moth, bronze beetle, leech

\* Bordeaux mixture 3 : 4 : 50 strength (4oz. of copper sulphate and 5oz. of fresh hydrated lime to 4 gallons of water) may be used on pear trees in place of lime sulphur sprays.

† Repeat this spray at intervals of about 18 days until a month before the apples are ready to pick.

‡ If leaf-roller caterpillar is troublesome, use arsenate of lead (1½oz. plus 2½oz. of hydrated lime to 4 gallons of water) instead of DDT.

In late spring woolly aphids may become troublesome and sprays of lindane wettable powder or emulsion may be used.

In January or February summer oil (¼ pint to 4 gallons of water) may have to be applied to control red mites. Two sprays 10 to 12 days apart are necessary. Oil sprays must not be applied sooner than 14 days before or after sulphur sprays.

**BERRY FRUITS (Except Strawberries)**

Time of application	Treatment	Pest or disease
Bud movement	Bordeaux mixture (6½oz. of copper sulphate and 5oz. of hydrated lime to 4 gallons of water) plus 1oz. of arsenate of lead	Leaf spot, botrytis, leaf-roller caterpillar
Fruit set	Bordeaux mixture (5½oz. of copper sulphate and 5oz. of hydrated lime to 4 gallons of water)	Leaf spot, botrytis
After harvest	Bordeaux mixture (as above)	Leaf spot

**STRAWBERRIES**

Time of application	Treatment	Pest or disease
Pre-planting (foliage dip)	Bordeaux mixture (3oz. of copper sulphate and 3oz. of hydrated lime to 4 gallons of water)	Leaf spot
Mid-August Mid-September Mid-October	Repeat above spray	Leaf spot
After harvest	Repeat above spray as required at monthly intervals	Leaf spot

**STONE FRUITS\***

Time of application	Treatment	Pest or disease
Bud movement of leaf buds	Bordeaux mixture (6oz. of copper sulphate and 5oz. of hydrated lime to 4 gallons of water)	Leaf curl, shot hole, bladder plum, brown rot

Repeat the above spray in 7 to 10 days at 4oz. : 5oz. : 4 gallons strength where leaf curl has been particularly severe in past seasons or when the weather is cold and wet after the first spray.

† Before blossoms are fully open Lime sulphur and colloidal sulphur (¼ pint of lime sulphur plus 1½oz. of 40 per cent. or 2½oz. of 25 per cent. colloidal sulphur to 4 gallons of water)

\* Lime sulphur sprays should not be applied to apricots, as their foliage does not tolerate this spray. A 3 : 4 : 50 bordeaux spray (4oz. of copper sulphate and 5oz. of hydrated lime to 4 gallons of water) should be applied instead.

† Repeat at intervals of 3 to 4 weeks until 3 weeks before picking. Where leech (pear or cherry slug) is troublesome apply DDT (50 per cent. wettable powder at ½oz. to 4 gallons of water). If aphids are present, lindane emulsion (1 fl. oz. to 4 gallons of water) should be added.

**Brown Rot**

In home orchards where brown rot has been particularly troublesome use of one of the newer spray materials which have shown great promise under trial may be valuable. These sprays can be used with safety on apricots. A suitable spray programme is:—

Time of application	Treatment	Remarks
During flowering season	Dichlone (½oz. to 1oz. of 50 per cent. material to 4 gallons of water)	Do not mix with summer or winter oil
Rest of the season at 2- to 3-weekly intervals	Captan (1oz. to 2oz. of 50 per cent. material to 4 gallons of water)	Do not mix with summer or winter oil, bordeaux mixture, or lime sulphur

**CITRUS TREES**

Time of application	Treatment	Pest or disease
Petal fall of main blossom	Bordeaux mixture (4oz. of copper sulphate and 5oz. of hydrated lime to 4 gallons of water)	Verrucosis and other fungous diseases

Spray in October, November, and December with the same mixture if verrucosis has been troublesome.

Early February Summer oil (1 pint to 4 gallons of water)  
 Late May Bordeaux mixture (as for petal fall of main blossom) plus summer oil (as above)  
 Scale insects, sooty mould  
 Brown rot, hard wax scale