INSECT PESTS OF ROSES

There are numerous insect pests of roses. Seven of the most important pests in Ontario are:

- **Aphids** (Hemiptera);
- The rose chafer, *Macrodactylus subspinosus* (Fab.);
- The Japanese Beetle, *Popillia japonica* Newman;
- Sawflies, (Hymenoptera);
- Leafrollers, *Choristoneura* sp.;
- The Mossy Rose Gall Wasp, *Diplopepis rosae*; and
- The Raspberry Cane Borer, *Oberea bimaculata* (Oliv.).

The biology of the pest, symptoms of its damage, and suggestions for control are presented in this factsheet. These pests are probably of most concern to the homeowner. Where possible, control methods other than chemical controls are suggested.

**Aphids**

Several species of aphids feed on the leaves, young shoots and buds of roses. The most common species are the green peach aphid, the rose aphid, the potato aphid, and the melon aphid. Adults are green or pinkish with long black cornicles (tube-like projections at the rear of the abdomen), and pear shaped bodies (they are approximately 2 mm in length). During the spring and summer aphids have a high rate of reproduction, hence a heavy infestation can appear in a short period of time. There are many generations per year. Shiny, black eggs are laid on the stems and branches. Winter is passed in the egg stage.

These pests generally appear in May and June. They feed by sucking the juices from young shoots, buds, and leaves. Various symptoms can indicate the presence of aphids. Leaves are often curled, puckered, or stunted. They will also turn yellow or brown and fall prematurely. Flowers are sometimes misshapen and have streaked petals. Black sooty mould will also appear as a result of honeydew produced by the aphids. Aphids can carry viral diseases, which can be harmful to roses.

Yellow sticky board traps may be used to indicate when aphids have arrived. If damage is not too extensive, infested branches can be pruned and destroyed. A non-chemical spray such as insecticidal soap is affective against aphids.
Rose Chafer

This fawn-coloured, long-legged beetle usually appears in late May or early June. Adults are about 10 mm in length and are covered with dull yellow hairs. They move sluggishly on the foliage and stems. There is one generation per year. Winters are spent in the larval or grub stage in light, sandy soil. These grubs will feed on the roots of roses and lawn grasses causing serious damage. In the spring, the larvae come to the surface and pupate. The pupal stage takes place in May and lasts about 2 weeks. Adults emerge and feed on flowers, buds, and foliage for 3-6 weeks. They have chewing mouthparts and damaged leaves appear skeletonized. Adults will also attack grapes, berries and other garden flowers. After the feeding period, eggs are laid into the soil where they will hatch in late summer.

Light infestations, which are more likely in the home garden, can be controlled by hand picking and destroying the beetles. Since much of the life cycle is spent at or below the surface of the soil, working the soil can prove effective in control. Cultivating in May destroys pupae, in July, eggs will be killed, and in the fall, larvae will be destroyed. This pest will not breed in moist soil or shaded areas. Therefore, increasing the amount of shade or adding clover to grass will increase the moisture in the soil and reduce survival of larvae.

Japanese Beetle

Adult beetles are metallic green, with coppery brown wing covers and six tufts of white hairs around the abdomen. They are oval in shape and about 1 cm in length. Adults first appear in early July and are present for 30 to 40 days. Eggs are laid in late July and August about 5-15 cm into the soil. They hatch a short time later and grubs burrow deep into the soil to overwinter. The following April, the larvae move up in the soil to feed on roots. They pupate in June for about 2 weeks. The life cycle takes one year.

Adults gather on the blooms after they open, and quickly destroy them entirely. They also feed on fruits and foliage. They completely skeletonize leaves. The larvae attack the roots causing serious damage. The Japanese beetle attacks more than 276 different plants.

The home gardener can usually control this pest by hand picking and killing the adults. Shaking branches in the morning, and gathering the beetles when they are not active is effective. Many natural controls exist for the pest including parasites, predators, birds, weather, and milky spore disease. Milky spore disease is a bacterial disease caused by a bacterium. The spores of this bacterium occur naturally in the soil and infect the larvae of the Japanese beetle.

Sawflies

Several species of sawflies occur on roses. Some sawflies cause damage by feeding only on leaves where others damage by boring and feeding within the stem. Adult sawflies are about 5-8 mm in length, they have four wings, and their abdomen is broadly joined to their thorax.

The larvae of the bristly rose slug sawfly skeletonize leaves from the underside and later eat holes through the leaf leaving only the large vein. The larvae feed mainly at night and are therefore not visible during the day. There are usually 2 generations per year. Most damage is apparent in late summer or early fall.
The common rose slug sawfly also skeletonizes leaves but does most damage in the spring. It usually feeds on the upper surface of leaves. It causes a considerable amount of injury to roses. Eggs are laid in the serrations at the edges of young leaves, usually one egg deposited within each leaf. There is only 1 generation per year.

The larvae of the curled rose sawfly eat the entire leaf surface. They then bore into the pith of pruned rose canes at the pruning cut. There are 2 generations per year.

The large rose sawfly is common in home gardens. Eggs are laid in a double row on shoots, each egg in a separate incision. The incision becomes blackened. The larvae may be found eating leaves from May to October. The larva is bluish-green with yellowish-black along the back, and six rows of black shining bristly tubercles. There are two generations per year.

For the above-mentioned sawflies, hand picking of larvae may prove effective, if infestations are not severe.

The rose stem sawfly is wasp-like and appears in early summer. Eggs are laid in punctures made in the rose canes. Larvae bore through the canes causing shoots to stunt, wilt, or die back. To control this sawfly, canes must be pruned below the infested section.

**Leaf rollers**

Adults are small moths with mottled wings. The larvae are the damaging stage. Eggs are laid on the bark of roses or leaves in the spring. The pale green larvae hatch and become active early in the spring. There are 2 generations per year and the second-generation larvae are the most damaging. Leafrollers overwinter in the pupal stage. They are serious pests of orchards and are occasional pests of roses.

The larvae feed on and roll leaves, sometimes tying them with webs. Feeding on leaves appears as skeletonization. Larvae will also attack opening buds and new leaves. They will chew holes in young rosebuds.

If infestations are not severe, larvae may be crushed by hand as they are found. Natural controls such as predators and parasites will also keep numbers down. If infestations are serious, sprays such as carbaryl, pyrethrin, rotenone and *Bacillus thuringiensis*, a biological control agent, may be applied. To be effective, sprays must be applied early in the season before the rolled leaves protect the larvae.

**Gall Wasps**

Many species of gall wasp attack roses, each producing a characteristic gall. A gall is an outgrowth or swelling of unorganized plant cells. It is usually spherical. Each gall contains the larva of a gall wasp. The mossy rose gall wasp is the most common gall wasp infesting roses. The female wasp lays her eggs in young leaf buds in the spring. The plant reacts to this by producing a mossy gall. The moss-like galls are greenish or reddish, about 2.5 cm in diameter, and appear in June and July. The larvae remain inside the galls until the following spring. They are common on wild roses but seldom appear on garden hybrids. Mossy rose galls have little effect on the plant aside from being unsightly. The only method of control is to prune and destroy stems harboring galls.
Raspberry Cane Borer

Adults are slender, black, long-horned beetles, with a red-orange thorax. They are 1-2 cm in length. The larvae bore into and down the stem to below the ground where they feed, overwinter and pupate. In the spring, the adults emerge and are active from June to August.

This is only an occasional pest of roses. Females use their mandibles to girdle shoots with 2 rows of punctures, about 3-5 cm apart, between which they lay their eggs. This damage causes restriction of sap flow. Blackening and wilting of the branch tip occurs within a few days of ovipositing. The shoots die back to the point of the punctures. This damage is apparent in June and July. The larvae cause a reduction in the health of the plant as they feed within the stem and roots.

Usually, only a few plants are attacked. Adequate control can be achieved by inspecting plants weekly in June and pruning wilted tips 15 cm below the punctured area. The pruned tips should be destroyed immediately.

Controls

Please contact a local garden centre for product advice. You may also wish to visit the Ontario Ministry of Agriculture Food and Rural Affairs "Online Gardener’s Handbook"
http://www.omafra.gov.on.ca/english/crops/gardbk/ghlinks.htm

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