

## SOFI OCN 3428 - OC&C: Unit 2 Theory of Organic Cultivation Element 12

# ORGANIC SPRAYS : PESTICIDES / POISONS

It can take time to set up a garden that is in sufficient balance such that pests and diseases are no longer a problem, and to achieve this balance demands much experimentation, observation and meditation. On the way to this garden paradise it may feel necessary to use some control measures, including pesticides, some of which are permitted in organic systems, though only as a last resort.

Traditionally many gardeners made up their own poisons from materials available around the house and garden, such as infusions made from rhubarb leaves, chrysanthemum flowers, cigarette butts (nicotine), wormwood. All such home made preparations are currently illegal, and indeed some are highly toxic to humans.

There exists on the market a range of registered products, the most commonly listed below, with some comments. Compare with handout on LIQUID FEEDS AND SPRAYS, which suggests a range of non-poisonous sprays that can be prepared at home and used as tonics against pests and diseases.

**DERRIS (Rotenone)** Easily available spray or powder to kill small insects such as aphids, flea beetles, thrips, and caterpillars and sawfly larvae. Not always very effective. Harmful to fish, as well as three good friends; ladybirds, worms and anthocorid beetles.

**PYRETHRUM (Chrysanthemum cinerariaefolium)** Used against aphids, caterpillars, flea beetles. Not always effective. Poisonous to fish, bees and other beneficial insects. Grow Pyrethrum flowers instead and enjoy the pretty blooms!

**INSECTICIDAL SOAP (Potassium salts)** Kills or hampers aphids, whitefly, red spider mite. Spot-spraying useful technique, but blanket use could harm ladybirds. Some plants' leaves are sensitive to soaps.

**BORDEAUX MIXTURE (Copper sulphate + hydrated lime)** To control spread of fungal disease. However, harmful to some plants, especially when stressed.

**SULPHUR** In powder form to control powdery mildew/apple scab. Harms some predatory mites and beneficial insects. Damages certain varieties of apple and gooseberry.

**SOFT SOAP** Mainly used as a wetter; added to other sprays to aid adhesion of chemical to leaves. On its own helps inhibit spread of aphids if used regularly.

**BIOLOGICAL PEST CONTROL** Currently an expanding market both in organic and chemical-based agri-/horticulture. New products available frequently. Most are effective only under specific conditions (enclosed space/narrow temperature ranges) and are expensive for the non-commercial/small-scale grower.

Learner Sig.

Date

Assessor Sig.