

ROSE GARDEN MAINTENANCE WITHOUT USING CHEMICALS

It is becoming increasingly difficult to both maintain healthy, vigorous, pest & disease free ornamental rose gardens whilst avoiding public and workers concerns about exposure to toxic pesticides.

McHort have developed a biological maintenance programme suitable for rose gardens which can replace the use of traditional chemical based regimes.

The table below illustrates which pests & diseases are suppressed with our biological programme.

<i>PEST (TOP)</i>	<i>PEST (ROOT)</i>	<i>DISEASE (TOP)</i>	<i>DISEASE (ROOT)</i>
APHID	THRIPS	BLACKSPOT	ROOT ROTS
RED SPIDER MITE	ROOT MEALY BUG	MILDEWS	COLLAR ROTS
TWO SPOTTED MITE		RUSTS	
THRIPS		BOTRYTIS	
LEAFHOPPERS			
SCALE			
MEALY BUG			
CATERPILLARS			



Implementing any biological regime requires a good understanding of the likely threats, the life cycles of the various pests and the conditions that support optimum disease pressure. Accurate identification of these threats is critical to success. Compatibility, frequency of application, selection of the best natural organisms and application methods also have a critical bearing on success. McHort have extensive practical experience for you to rely on in this area of management as well as a suite of products to achieve results.

See overleaf for product details.



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PLANT SOAP PS1 + TRICHOSPRAY NURSERY in combination.

Plant Soap is a starch based high viscosity colourless & odourless liquid which when sprayed at high volume & high pressure will smother many biting & sucking insects as adults, juveniles & eggs. Used as directed it will not burn even the most recently unfurled leaf or petal.

TRICHOSPRAY NURSERY contains a living organism, *Trichoderma sp.*, which colonises the plants surfaces forming a living barrier which actively excludes other pathogenic organisms. The *Trichoderma sp.* in TrichoSpray actually use the starch component in Plant Soap as a protein source to fuel & sustain colonisation & exclude pathogens.

In combination the two provide viable pest & disease suppression on the aerial parts of the rose plants from a convenient to spray format. Spray applications are ideally made once a month.



TRICHODRY is a granular protein source onto which soil dwelling *Trichoderma sp.* have been banded. It is applied to the soil surface around the base of rose plants or if planting incorporated in the planting pit. The *Trichoderma* then colonises the root zone of the rose forming a living barrier to root zone pathogens. Application is made annually and covered by an organic mulch such as pea straw or bark.

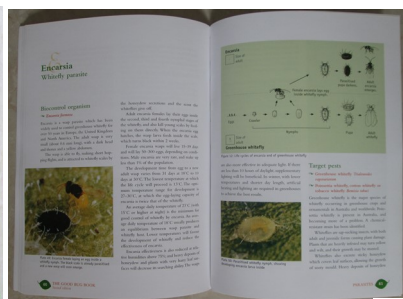
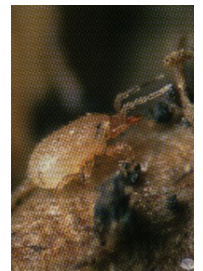
APEX 'Enhance' Landscape Color 14-6-11.6-Te is an encapsulated fertiliser designed to provide sustained nutrient delivery to maintain plant vigour. The balanced formulation promotes more branching, heavier canes, thicker darker foliage and maximum flowering. It is surface applied around roses bushes annually prior to mulching. It is not prone to leach loss due to the encapsulation and releases nutrients progressively throughout the season.

We also recommend foliar feeding, periodically using **Nitrosol Organic** a fish blood & bone formulation which feeds, glosses the leaves and dissuades possums.



HYPERMITES are native predator mites which dwell below ground in the root zone of plants in leaf litter and mulch. They predate on a wide range of insects that includes the pupae stage of Thrips and all stages of Root Mealy Bug.

Live Hypermites are scattered on the soil surface underneath roses annually before mulching. Populations are sustained by the mould mites feeding on the organic mulch. Being natives to NZ they are thoroughly acclimatised.



THE GOOD BUG BOOK is a internationally acclaimed reference work produced in Australasia by leading industry experts. It includes colour plates, diagram's and tables describing the appearance & life cycles of both pest & their natural enemies. Tables show chemical compatibilities using both active ingredient and trade names.

Great for the identification of both pest and the good guys!

BACILLIUS thuringiensis (BT) is a biological control of Caterpillars applied as a foliar spray. It is extensively used by commercial growers of fruit & vegetables. It is sold under several commercial brand names. It is effective, safe and recommended for use on a wide range of ornamentals including roses. It is applied when caterpillars attack.

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