

## MAGNOLIA SCALE

Magnolia's are beautiful ornamental flowering trees and with many species available there is a wide array of sizes and colours to choose from. Magnolias like most trees may become a host to certain insects. The most common for Magnolia is Magnolia Scale, or Cottony Cushion Scale. This is a sap-sucking insect that is most often overlooked and inconspicuous, causing serious long-term effects. If left untreated it can result in the death of the tree.

### HOW DO I KNOW IF MY MAGNOLIA IS INFESTED WITH SCALE?

Unfortunately when the insect is easily visible, it is often when the tree is heavily infested. In order to prevent severe attacks one should examine the tree seasonally. Late fall is the best time to do this, once the leaves have fallen. A healthy magnolia tree has, smooth, grey - light brown branches and stems. Scale insects over winter as brown, often dead adults that are still attached to the stem or as brown Nymphs. Their brown bodies create a bumpy surface and a distinct visual difference when examined closely.

Magnolia Scale are oval, flat shaped insects that fix themselves to the undersides of leaves or young stems and shoots. Small colonies lay flat and are very slow in their movements, often hardly recognizable. They blend in with their surroundings during certain times of their life cycle. The young adults are shiny, tan-brown in colour and smooth.

They have sucking mouth-parts and can completely encrust branches. They damage the trees by removing the fluid within the stems. Badly infested branches and twigs are weakened and growth is retarded. Leaves may also look under-developed. Under an extreme attack, trees may be killed. As is with most soft scale insects, the excess plant sap is excreted as a sweet, sticky material called honeydew. The honeydew drips onto the foliage and branches and a dark fungus, black sooty mould, grows on the honeydew which results in black, sticky leaves. The honeydew also attracts ants, bees, wasps and flies which feed on it. In extreme conditions the sooty mould is so dark that it prevents photosynthesis from occurring altogether, reducing the overall health of the tree overtime.

The nymphs in mid-summer are purple to brown, turning white by late-summer. Heavy populations reveal their noticeable white coatings, but in small infestations hide in the large leaves. It is the egg sac that is a white cottony mass and is predominantly on the back of the females.

Crawler scale insects are red with dark legs and antennae. These immature scales, known as 1<sup>st</sup> and 2<sup>nd</sup> in-star nymphs settle on twigs and leaves, usually along the veins where the sap is most concentrated. Tiny males have wings and are rarely seen. They seek a secluded place on the tree or ground to form a loose white cocoon. This scale can have up to 3 generations in a year.

### TREATMENT

The best treatment is in the prevention of heavy populations by doing regular examinations and promoting the health of the tree. If large colonies have infested your tree there are simple ways one can control their devastation.

#### 1<sup>st</sup> Control: Promote the overall health of the tree

Magnolia's tend to recover from an infestation of scale far quicker and are more apt to handle their attack when healthy. Weakened trees, due to lack of moisture or nutrition fall victim to small populations quickly. Promote health by regular deep watering at the drip line of the tree and fertilize when trees become mature. Pruning of any broken or crowded branches invigorates the growth and strengthens the tree at maturity. Replenish the earth below the tree canopy yearly by top dressing with triple mix, topsoil or composted manure. It is also a good idea to mulch below the canopy of the tree. This improves the nutrients at the root level, promoting further health of the tree.

#### 2<sup>nd</sup> control: Apply a horticultural or dormant oil spray during the dormant season or spray foliage when the tiny reddish scale crawlers are active.

Horticultural oil acts in two ways. 1) It prevents over-wintering eggs from hatching. 2) It clogs the breathing organs of the scale, causing them to suffocate.

Timing is crucial and there are short windows of opportunity that are the most effective in targeting the insect. The dormant period (state of rest, between late fall-early spring) is the best time to spray Horticultural Oil. Spraying can be done in October-November prior to freezing temperatures and again in March-April. The entire tree should be thoroughly sprayed.

Be aware that the flower buds may be damaged for the season if the dormant oil is used in the spring once the buds begin to swell or open. Oil at the dormant rate can also burn buds if temperatures are too warm. Refer to our Dormant Oil Spray Info Sheet and read all package directions carefully.

Horticultural Oil can also be used during the Summer months at a reduced rate.

The 2<sup>nd</sup> and 3<sup>rd</sup> generation nymphs are active in late August. The oil suppresses their activity preventing the adult stage from maturing sexually. Use 5-10ml of oil/litre of water during this time. Do not spray oil during dry, hot conditions, the oil may burn tender foliage if temperatures exceed 25°C or in high humidity.

#### 3<sup>rd</sup> Control: Prune out infected branches

On heavily infested branches the scale populations are so numerous that the quickest solution is to prune them off. Typically no more than 1/3 of the total branching network should be pruned off. Do not compost branches. Discard or destroy. Prune the worst of the branches and treat the rest oil.

Another method is to use a soft brush and manually brush off the scale off after a good rain. This in conjunction with the oil treatment will reduce the many layers of scale on heavily infested trees.

With the above methods one can easily return the Magnolia to its former glory. For heavy infestations it may take many years before it can be completely under control.

For further information please ask one of our Sales Staff. Always read and follow label directions for safe use of any pesticide.