



## **Public Gardens Deal Adjust to Pesticide Ban**

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### **Peterborough and Area Master Gardeners**

This summer's weather has been exceptionally wet in southern Ontario. Add cool temperatures and we have perfect conditions for disease to develop in our gardens. At a time when we are struggling to find alternative ways to deal with problems without using chemicals, many of us are feeling the strain.

Imagine the challenge faced by large gardens with extensive collections like the Royal Botanical Garden in Burlington and the Niagara School of Horticulture in Niagara Falls. Recently we had the opportunity to visit these two very special gardens and were able to speak with knowledgeable staff or volunteers.

Both gardens were dealing with an infestation of black spot on their roses. Black spot is a fungal disease which attacks the foliage of roses. It starts as small black spots and as the disease progresses, yellow areas develop. New leaves are particularly susceptible. Eventually the entire leaf will turn black and fall off, and if left unchecked, the whole rose will be affected. A bed of rose sticks is not overly attractive, no matter how glorious the flower might be.

Prior to the implementation of the Ontario Pesticide Ban, rose growers dusted their plants with a fungicide. Used regularly, it helped to keep the disease in check.

Now we are forced to be more creative. At the RBG, the course of action was to clear away all infected foliage and spray with Phyton 27, a copper solution.

The Niagara gardeners were being more aggressive. The garden is located across the road from the Niagara Gorge and is frequently bathed in mist. A two inch layer of pine mulch had been applied to the rose beds early in the year and another inch was applied in mid season. The mulch covers the infected soil keeping spores from bouncing up onto the foliage in the rain. This mulch will be totally removed and used in another distant location next season.

Mulch was also applied to the beds of annuals that are located nearby to keep continuity. One added bonus of this course of action is that there are few weeds in any of these beds and the amount of time required for maintenance has been drastically reduced.

The roses in Niagara seemed to be in better condition than at the RBG but even at Niagara some roses did not look very good. One thing was very obvious; some varieties of roses are less susceptible to the disease than others. The 'Knockout Series' which comes in a variety of colours had fairly clean foliage. Look for roses that are less likely to contract the disease.

Regularly inspect your roses and if you see any sign of black spot, immediately remove these leaves and dispose of them in the trash. Do not put them into your composter as the spores will likely survive since most home composters do not achieve a high enough temperature to kill off all pathogens.

Try applying mulch. This will keep the spores from splashing onto the foliage during rain storms. It is vital to clean up all foliage in the fall. The spores of the fungus will overwinter in the soil and as soon as the temperature reaches the mid 20's Celsius and the humidity increases, they will germinate and infect the plants. Symptoms will appear within days. Applying dormant oil mixed with sulphur in the fall and early spring may also help.

Avoid wetting the leaves when watering. Improve air circulation by planting bushes well apart and pruning carefully, particularly hybrid teas.

Some success has been noted with home remedies. Dissolve one teaspoon baking soda in a litre of water. A few drops of liquid soap will help make the solution cling to the foliage. Just spray the infected plants thoroughly. Two percent milk, mixed with an equal amount of water, can also be used. No matter what is sprayed on the foliage, it must be reapplied after it rains. This is no easy task this year. Apply early in the day to give the foliage the opportunity to dry.

We noticed dog strangling vine among the collections at the RBG. The gardeners were trying to control it by hand digging but this increases their labour costs considerably.

We also saw areas at both gardens where they were using a technique called solarisation to clear out all weeds and to start fresh. Desirable plants are removed and then a black plastic tarp is placed over the area and left in place for months to kill everything. The areas we saw will not be uncovered until the spring. To ensure that weeds are not transferred to the new site, it is a good idea to wash the roots and to pot up the plants that are being saved. Wait several weeks before replanting in their new location.

All of the beautiful gardens at the Niagara School of Horticulture are made possible by the work of about a dozen students who are taught horticulture there each year. As part of their training, they design and manage the gardens. The graduates are among the best trained gardeners in Ontario. If a young person was very interested in gardening and wanted a career in the trade, this

is the place to apply. Scholarships are available through the Peterborough Horticultural Society which would cover most of tuition, room and board.

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