

Neem Oil – An effective tool for the gardener

by Neil Neumann, Master Gardener

The Fort Vancouver Rose Society (FVRS) has planted and maintained the rose garden at Esther Short Park, Vancouver, WA, for more than 20 years. Beginning in spring, 2002, and continuing to the present, the FVRS has exclusively used pure neem oil as an organic method of controlling insects and diseases common to roses. The garden currently consists of over 100 roses. Because it is a garden heavily visited by the public, no toxic insecticides or fungicides are used. Only organic fertilizers and soil amendments are applied. The result of this organic regimen is a very clean and beautiful garden. The foliage is healthy and verdant, blooms are good sized and plentiful, and visitors are able to safely enjoy the garden.

I am a member of the FVRS and have weekly sprayed and deadheaded the garden. Also, I help in both the fall and spring pruning. I provide this information so that if a personal bias is evident, it is based on experience. As a disclaimer, I have no financial or other gain derived from using pure neem oil. The benefit to me has been a personal organic garden reasonably free from disease and insect problems endemic to roses and other garden plants. The real bonus is that my garden is safe for my grand- children, other family members and visitors, neighbors, neighbors' pets and wildlife.

Pure neem oil is derived from the seeds of the Indian neem tree. It is naturally biodegradable and is harmless to humans, animals and beneficial insects such as lady beetles and bees. It is not necessary to wear gloves, goggles or any other protective equipment when using neem oil. There is no toxic build-up. Neem oil is an ingredient found in many products including toothpaste, soaps and lotions. Neem oil is metabolized by the plant and therefore does not rely on a coating to be effective. As such, it is unaffected by rain or watering and is applied as a foliar spray and root fed systemic.

Pure neem oil is a broad-spectrum botanical pesticide and fungicide. However it, like any other treatment, does not provide either a quick or permanent kill for insects or diseases. The reality also is that once black spot, powdery mildew, downy mildew, anthracnose, rust or fungal leaf spot become established, control with any fungicide becomes a difficult and slow process. The other reality is that aphids infest many plants including (but not limited to) hydrangeas and maple and birch trees, and once they begin hatching they continue to do so at alarming rates. This is especially true when there is a profusion of new, tender growth to attract them. Spider mites occur during hot weather and will also continue reproducing rapidly. They can defoliate the plant.

The keys to any effective disease control program are selection of cultivars that are resistant, proper plant placement, adequate moisture, and good garden hygiene, with preventive maintenance. In the case of insects, regular detection and control is very important.

This is where the use of pure neem oil becomes important in prevention. In late fall and early winter, spray once a month. This would be roughly November through February in the Pacific Northwest. From that point on we spray weekly at Esther Short Park, as I do in my own garden. During the growing season be sure to spray both the top

and underside of the leaves to control aphids, mites, black spot, rust and powdery mildew before they get a good start.

Spraying a band of neem oil around the base of plants such as hydrangeas and rhododendrons will also assist in controlling slugs, snails and weevils. I have used neem oil successfully to control anthracnose and powdery mildew on dogwoods, lilacs and deciduous azaleas.

As with any treatment applied to plants there are a few rules to be observed:

- Do not apply neem oil within 2 weeks of using any product containing sulfur.
- Do not apply neem oil when the outside temperature is above 80 degrees.
- Do not apply neem oil to known sensitive plants such as Japanese maples, Alberta dwarf spruce, blue spruce (as a general warning I would avoid spraying neem oil that results in spray reaching the needles of the plant)
- Finally, I prefer to spray in the shade and when there is little wind, usually in the evening.

The usual caveats as always, READ and FOLLOW the product label instructions.

A few photos of my garden in bloom last year:

