If you live in western Minnesota, your pH problem in clay soils is compounded by higher levels of calcium carbonate. This effectively reduces the choice of plants for your garden to those that can tolerate the higher soil pH levels.

In our daffodil planting efforts last fall, we first augured the planting holes. Then iron sulfate was applied with a broadcast spreader over the area prior to planting the bulbs. In this way the sulfur was mixed into the planting soil when the bulbs were planted. Use personal protection when applying iron sulfate as it is a fine dust. A protective dust mask and safety goggles or glasses is needed, and a disposable protective coverall (such as *Tyvek)* is ideal. If you don’t wear a coverall, be aware that much of your clothing will have rusty stains after washing. Be sure to wash your clothing separately from your non-gardening clothing.

*The information is given for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement is implied.*

*Minnesota Nursery and Landscape Association Newsletter, April, 1989.*

**BLACK KNOT OF PRUNUS**

by CYNTHIA ASH, Assistant Extension Specialist Plant Pathology, Minnesota Extension Service

Black knot is a common fungal disorder of wild and cultivated species of plum and cherry. The characteristic symptom is an elongate woody black gall formed on the sides or encircling branches and occasionally trunks of susceptible hosts. Infected shoots may bend and twist at the site of infection giving the stem a gnarled appearance.

New infections of black knot occur in the spring during wet periods on new growth or at wounds. This infection can occur in as little as 6 hours when the temperature is 21-24 C. Infection continues to occur during the summer but at a much lower level. Infections which occur in the spring may be slightly visible by fall as swollen cracked stems. The infection is put on hold during the winter but continues the next spring with the development of an olive green color to the knot and the release of spores during wet periods. Approximately two years after the initial infection the knots are hard and black in color. If the stem is not killed the knot can become perennial.

Susceptible plants should be inspected in late winter for swollen and galled areas. These should be removed at least four to five inches below any sign of infection and destroyed. Several inspections during the spring will aid in removing any infections which were missed. A dormant application of lime sulphur following late winter pruning will reduce the amount of overwintering inoculum on the plant and further reduce the possibility of spring infection. (Dormant applications are applied after pruning but before bud break. The day temperature should be in the forty degree range and the night temperature should not fall below freezing.) Regular fungicide applications can be used to increase control during the growing season but should be considered as a third line of defense after pruning and lime sulphur application.

---

**We are family!**

LESCO fungicide products are available in liquid, granular and water dispersible granule formulations - for convenience and broad-spectrum control. Enlist the help of the LESCO family for protection of fine turfgrass. Order today! LESCO. Quality name. LESCO Fungicides. Quality products.

Call (800) 321-5325 Nationwide

Always read and follow label instructions before using any chemical product.

LESCO, Inc. 52055 Lake Road, Rocky River, OH 44116
(216)333-9250

Dale M. Parske
Sales Representative
LESCO of Minnesota

---

**From tee to green and everything in between, nothing controls turf diseases like Chipco 26019.**

RHONE POULENC AG COMPANY
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, NC 27709
919/549-2000