



Clover control may be effected by the use of 2,4,5-T before hot weather. One pound of herbicide per acre will usually be sufficient. Another material, silvex (Kuron), has given good control of white clover. This product has not yet been widely used on turf. Therefore the superintendent should try it on small areas first. Manufacturer's directions should be followed closely.

Clover and annual weeds on Bermudagrass fairways may be effectively controlled by the use of strong solutions of nitrogen. Dissolve ammonium nitrate in water at the rate of 1 pound to 1 gallon of water. When the material is in solution, allow it to settle and strain into the sprayer tank. Apply at the rate of 200 gallons per acre. All foliage, including Bermudagrass leaves, will be burned but the Bermudagrass will recover rapidly and will respond to the fertilizer treatment. CAUTION: Do a thorough job of cleaning all metal with which the solution or the spray comes in contact. Nitrogen solutions are extremely corrosive to metals.

Aquatic weeds in ponds or lakes are a frequent source of trouble for the superintendent. Many of these problems need individual handling. One good general purpose material is sodium arsenite. About 8 parts per million of sodium arsenite in water will kill most vegetation, whereas most species of fish are not harmed at concentrations below 12 parts per million.

In any treatment to control pond weeds in which fish life is a factor, it is wise to treat only a part of the pond at one time. When chemical action kills vegetation, it sinks below the surface and begins to decompose. The decomposition removes available oxygen from the water and fish may die as a result of suffocation. If only a part of the lake is treated, fish may move to an untreated portion where they will not be affected.

Algae bloom may be controlled by the use of dichlone. This product is available as a 50% wettable powder under the brand name Phygon XL. One-half to one pound of a 50% wettable powder applied to an acre of water surface will control blooms of blue green algae. Three to five pounds will control many of the scum-forming species of filamentous green algae. Treatment of the surface is recommended rather than application through water inlets. A spot treatment with a spray suspension at the rate of three pounds per 100 gallons will control isolated, floating patches of scum.

Fusarium patch disease may be active well into spring even though it has been called "pink snow mold" and has been associated with snow cover. This disease has been found on many courses in the south, so that its activities are not confined to the areas which have snow covers during much of the winter. Very often Fusarium attacks are accompanied by Helminthosporium activity. "Broad spectrum" fungicides such as Kromad are helpful. Organic mercury compounds such as phenyl mercury acetate are helpful in controlling the Helminthosporium. Inorganic mercury fungicides work well on Fusarium patch when it occurs alone.

Sod webworms and cutworms are pests which will begin to show up soon. One sod webworm infestation has already been observed this year. The sod webworm is very difficult to detect, as the damage of each individual worm is so minor as to escape notice. These worms rarely feed in daytime so that they may establish a large population before they are discovered. Cutworms on the other hand do a substantial job of clearing away grass leaves. Look for this pest after spiking. He uses the perforations in green surfaces as a ready made burrow. Both these insects are easily controlled by any one of several insecticides. Chlordane, DDT, aldrin, and dieldrin, are all effective. Spray or dust the insecticide on the foliage in late afternoon, leave it on the surface over night and water down the following day.

Sod webworm broods may develop in about 10 days. Therefore constant vigilance or a regular spray schedule is mandatory.

Nursery establishment is a project all golf clubs should undertake. A small putting green nursery provides a place for testing other grasses, and it furnishes a place to try out chemical materials that you may want to use. Most of all, it provides insurance because sod from the nursery may be used to patch greens that may become scarred through mechanical injury, chemical burn, or disease activity.

Because of the fact that putting green nursery sod is sometimes moved to putting greens, some thought should be given to soil preparation in the nursery. It is wise never to plant a nursery on soil that would be unsuitable for the surface of your putting green. The nursery soil need not be prepared to great depth, but near the surface it should be similar to soils in greens so that the moving of soil with sod will not cause a layering effect.

Tree roots are an ever recurring problem on putting greens and on tees. Use the root pruner to help this situation. It will make watering easier and your turf will be improved.

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"HERE'S A WHALE OF A NEMATODE STORY! Many of us have some sort of an idea about what nematodes are, the damage they do to crops and what they look like. We often hear how three of them will fit on the head of a pin. Well, we got interested in figuring out just how small are the smallest and how large are the largest. Almost every week we have heard about species that have extended their size range, but now we think we have found the two extremes.

"On the small end there is a new species of Aphelenchoides whose adults average 1/150 of an inch long. At the large end is Placentonema gigantissima which is 25 feet long. This giant is a parasite found in the placenta of whales. We're sure glad we are not mama whales, because there's not much that can be done about her parasite, but we can do something about the nematodes that attack crops." -- SCAN, March 1958. Sounds like a Jim Holmes story, doesn't it?

# **Mid-Continent Turfletter**

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