Winter WEEDS

SOUTHWEST REGION

By Pat Gross

Recent rains in much of the Southwest have caused the rapid growth of winter weeds including chickweed, brass buttons, swinecress, and Poa annua. Clumps of volunteer perennial ryegrass and Poa annua in dormant bermudagrass can be especially troublesome, contributing to inconsistent fairway conditions during this time of year. Reducing the fairway cutting height and increasing mowing frequency can help lessen the impact of the clumps until bermudagrass resumes active growth in the coming weeks. Application of a broadleaf herbicide should be delayed until bermudagrass resumes active growth. Although temperatures have been bouncing back and forth from warn to cool, it is best to wait for a more consistent pattern of warm weather so you can be sure bermudagrass has initiated steady growth and will not be damaged by broadleaf herbicides.

A couple of broadleaf weeds are becoming more prominent in Northern California and parts of Southern California; swinecress *(Coronopis didymus)* and Southern brass buttons *(Cotula australis)*. Both have a prostrate growth habit with finely divided leaves like a carrot top. These two weeds are actively growing during the late winter and early spring and can be observed throughout the course including greens. Swinecress can be distinguished by the flowers, which are small green pods, the skunk-like smell and the distinct tap root. Southern brass buttons has a small daisy-like flower, no bad smell, and a fibrous root system. These weeds are relatively easy to control in higher cut grass on the tees, fairways and rough with commonly used broadleaf herbicides. Poa annua greens are more susceptible to herbicide injury, and some courses choose to handpick or replace infestations with sod plugs from the putting green nursery to avoid damage.

Turf Diseases

Pink snow mold (Michrodochium nivale) continues to infect Poa annua putting greens in many areas of the Southwest. Damage is more prominent on shaded areas of greens. Any efforts to thin surrounding trees and improve sunlight will help dry the grass and reduce the damage caused by pink snow mold.

Aeration Programs

Many courses are experiencing worn, compacted turf conditions at this time, and superintendents are anxious to aerate in an effort to stimulate growth. Core aeration while temperatures are still cool can extend the time necessary for recovery. If aeration is absolutely necessary, less disruptive methods such as spiking, slicing, or water injection can be done as a temporary measure until the turf is growing strong enough to recover from coring.

USDA Develops Low-Cost Water Sampler

CGCSA Government Issues

The USDA's Agricultural Research Service says that small-scale water sampling may become less expensive, and thus possible in more locations, thanks to a compact sample collector designed by scientists.

The device collects samples of drainage or low-stream flows that can be analyzed for levels of nutrients, pesticides or fine sediment. It also provides total-flow estimates for given time periods. ARS agricultural engineer Robert Malone led development of the device when he was based at the ARS North Appalachian Experimental Watershed in Coshocton, Ohio.

The sample collector is small, useful in remote conditions, easy to maintain and easily constructed from readily obtainable materials. It collects about two percent of total flow at rates ranging from 0.01 to 3.2 gallons per hour.

Analysis of composite water samples is essential for tracking changes in chemical or sediment concentrations in surface water and groundwater. Costs, however, limit the number of sampling locations. Scientists say that few current samplers can collect, at low cost, both drip flow and continuous-streaming flow from tile drains, large soil blocks and springs. Many are bulky units, not designed for drip flow, that require extensive circuitry and cost more than $1,000. According to Malone, his sample collector can be built for $20 to $30, although some digging and construction will sometimes be needed for field use.

The sampler, in the form of a cube measuring roughly five inches on each side, works by directing percolating water droplets onto a rotating lid that contains a 0.16 inch-wide slot. The slot allows water to flow down into a collection container. The rotating lid is powered by a clock-type motor. The device should handle greater flow rates with minor modifications, according to Malone. It was designed by Malone, who now works at ARS' National Soil Tilth Laboratory in Ames, Iowa, and by hydraulic engineer James Bonta and soil biological technician Donald Lightell, both with ARS at Coshocton. The sample collector will eventually be presented to potential marketers.