Turf Questions

FRED V. GRAU

Drought Brings Out the Worst and Best in Grasses

As each season passes we note that, in certain respects, the weather differs from the year before. If we are observant, we note that the performance of certain grasses is affected. We are particularly conscious of the effort of prolonged drought, especially when there is no water system to supplement the moisture supply.

Central Pennsylvania was in a "drought disaster area" during the past summer. A broad belt stretching from Southwest to Northeast was affected. Small grains shriveled on the stalk, corn tassels withered without pollinating silks, pastures turned as "brown as the road," alfalfa fields turned yellow and stopped growing. The last time this happened was in 1957.

It Stopped the Crabgrass!

Crabgrass ceased to be a problem because there was not enough moisture to germinate the seeds. Turfgrass areas that received some irrigation developed plenty of crabgrass.

Poa annua lost its hold on reality early in the season. Lack of moisture took Poa completely out of the picture for the summer. True, it is coming back with the advent of fall rains, but its early disappearance gave more drought-tolerant grasses considerable opportunity to spread and fill the voids before they, too, stopped growing. The result was a net gain for the perennial grasses. As rains fell in September, the deep-rooted turfgrasses started growing and spreading long before Poa could possibly germinate and start crowding again.

Can't Be Coddled

Bentgrasses that had invaded lawn turf during periods of more ample rain suffered severely and, for the most part, passed out of the picture. The splotchy turf that was left was anything but desirable. As a result, seed mixtures containing bent seed took another kick down the stairs. In areas that will continue to be affected by periodic droughts, there is no place for a grass that must be coddled. When reservoirs run dry and drinking water must be hauled from a distance, there is precious little left over to water lawns or fairways.

Red fescues were ruthlessly weeded out by the drought. Weaker types were destroyed, leaving large bare patches. Stronger individuals survived and started growing "green as grass" as soon as two good rains fell. During "good" seasons there has seemed to be little to choose between the several strains of red fescue. One looked as good as another. The linedout plots at the Penn State turfgrass field day told another story this fall. Sturdy, hand-picked drought and disease resistant types that have been polycrossed to produce Pennlawn creeping red fescue proved the value of selecting and breeding for quality.

Can Come Back

Bluegrasses suffered in varying degrees as usual. Lawns and fairways of common bluegrass became spotted as weaker types gave up the ghost. Merion held on longest and recovered first, especially where it had been adequately nourished. It must be seen to be believed how quickly drought-parched bluegrass turf can become green almost overnight.

Warm-season grasses proved their worth



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time and again with the edge in drought resistance going to Bermudas. Zoysia does not have quite the ability Bermuda has to hold color during drought. The virtue of these grasses is their ability to continue to provide a dense, playable cushion of turf during the drought period, even though green color is not all that might be desired. The net result will be a continuing march of the warm-season grasses northward until their final limit is reached.

Tall fescue, last but not least, is one of those amazing grasses that is commanding attention because of its startling performance during periods of extreme stress. Long after bluegrass and fescue turned brown, tall fescue stayed fresh and green and continued to grow. At the end of the drought period, tall fescue retained more green color than any other turfgrass. Rains brought response from tall fescue more quickly than from any other grass. Obviously, some types failed to perform just as with other grasses.

Breeding Candidates

Observant investigators had a field day selecting types that may have value in a breeding program designed to produce a finer bladed type that will tolerate closer mowing and still retain turf density, good color, and disease resistance. Several of these promising selections are now being evaluated.

Crownvetch, while not strictly a turfgrass, proved its ability to survive drought of the worst kind on steep, rocky, impoverished slopes. Seed fields were fresh and green while conventional crops wilted daily. Rock outcrops along highways showed green only where crownvetch grew.

Sorting-Out Process

Nature, in her own way, continues the sorting-out process whereby the weak are eliminated and the strong survive. Man, in his own way, continues to upset the balance and to persist in coddling the weak while encouraging a too-large population of imperfect individuals to dominate and replace superior types of grasses that have survived adversity. It will not always be possible to provide water when needed to turfgrasses, nor to spray for diseases, insects and weeds on schedule.

The principle of a well-nourished, welladapted grass providing acceptable turf with minimum coddling is well established. To gain universal acceptance of this principle is our next big hurdle.

Periodic droughts may be said to have some "plus" values. Wet soils that become dry tend to crack, shrink and fracture. The result is deep aeration of a kind not achieved with mechanical devices. Drying tends to release nutrients which become readily available to plants when the soil is rewetted. The fresh green color of grass after a drought has been broken is good evidence of the released nutrients.

Diseases that require ample moisture fail to develop during dry periods. Little or no mowing is required. Poa, the foe, is wiped out. All of this may sound as though we "advocate" periodic droughts. What we are trying to say is: When drought hits, let's make the most of the advantages, count the blessings and observe what factors provide good playable turf in spite of lack of water.

Little solace is offered here to those who suffered through periods of excess rain, high temperatures and very high humidity. That is a subject in itself to be discussed another time.

Robert F. Pollick, 73, supt. at Llanerch CC, near Philadelphia, from 1931 until he retired in 1956, died in Sept. He was a former pres. of the Philly GCSA. He is survived by his wife and three sons.

Planned Purchasing Saves Time, Money for Courses

BY CLINTON KENT BRADLEY

Golf course maintenance, in making the country aware of high turf standards, has created buying problems for the supt. and club officials. The turf market, developed from the course, is in many ways competitive with golf operations. At one time, courses were the largest users of grass seed and mowing machinery. Now, they make up only a fraction of the nation's fine turf area although they continue to set the standards for maintenance.

This change in market dimensions has required supts. to plan, get their purchases authorized, and order golf course equipment and supplies well in advance of the dates when they are needed. Otherwise, the machinery or material may go to other users. In course maintenance, a week's delay may be costly and mean the loss of a good part of a season's expected benefit from the purchase.

The active, productive golf playing season is all too short in a large part of the

