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 Better Turf for Better Golf

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# TIMELY TURF TOPICS


 from the USGA Green Section
 

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## NEARLY EVERYONE HAS CRABGRASS

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Crabgrass is better known to most turf superintendents and to home owners than many of the commonly used turf grasses. Crabgrass is so well distributed over the United States that few turf areas escape its ravages; it is rated the Number One Enemy of good turf, more especially since 2,4-D has come into such common use to eliminate the broad-leaf weeds (dandelion, buckhorn, plantain, etc.).

There are several different kinds of crabgrass, but to the club member and to the average home owner the differences are relatively unimportant. All are alike in that they are summer annuals. This means that they reproduce each year from the seed which was produced the summer before. It means also that they make their best growth during the heat of the summer when most cool-season turf grasses (Kentucky bluegrass, red fescue and bentgrass) make the least growth.

Crabgrass has one identifying characteristic: it will not grow in heavy shade. It must have plenty of sun to germinate and to grow. It makes no difference to a crabgrass plant whether the shade is cast by an oak tree, a maple tree, a sycamore, a eucalyptus or a pine, or whether it is a deep, dense shade cast by a dense, tight turf of adapted perennial grasses.

No one is going to recommend that fairways and lawns be planted solidly to trees just to have enough deep shade

to control crabgrass. This leaves only one alternative: to grow a turf of adapted grasses so tight and dense that crabgrass will be eliminated by the shade of the turf.

Shade from turf can be produced in two ways: first, by letting the turf grasses grow tall, and, second, by growing turf grasses that produce a dense, crabgrass-resistant turf under continual close mowing. Turf superintendents who must provide a continually playable turf for golf, tennis, baseball, football and other sports played on grass cannot let grass grow tall just to control crabgrass. Close, frequent mowing is a requisite of good playing turf, and the principles of producing closely mowed crabgrass-resistant turf on fairways can be applied directly to home lawns. The only difficulty is that home owners are laymen when it comes to grass culture, and the principles of growing good turf usually are applied in an indifferent and haphazard fashion. Being a successful banker or lawyer no more qualifies a man to be a successful lawn grower than it qualifies him to be a good green chairman.

Now that we are committed to growing closely cut turf free of crabgrass, let us examine the problems and the possibilities. When we say "close-cut," we mean as low as 1/2 inch on fairways and up to 3/4 inch to 1 inch on lawns.

The first requisite for controlling crab-

grass, regardless of the type of turf, soil or climate, is to control insects which damage the grasses. In this respect modern insecticides such as Chlordane, DDT and others have the highest rating as crabgrass-control chemicals. For years since the advent of the Japanese beetle and destruction of turf by white grubs, chinch bugs, sod webworms, cutworms and others, it has been obvious that crabgrass first invades where these insects have damaged the turf.

In this article we shall not attempt to go into the details of the use of insecticides. This information can be secured from every county agent in the United States, from every extension specialist at the colleges, from dealers in lawn supplies and equipment and from the packages themselves.

Common Kentucky bluegrass (historically one of the principle ingredients in lawn and fairway mixtures) is one of the turf grasses that is least able to resist the invasion of crabgrass. There are two reasons for this: first, common Kentucky bluegrass is susceptible to leafspot disease which weakens the grass in the spring and allows weed invasion; second, this grass enters a dormant period in summer. Weeds can invade any grass during its dormant season unless it is protected by another grass which makes its best growth during the dormant period of its companion grass.

The new B-27 bluegrass, an improved type selected by the USGA Green Section and developed cooperatively with the U.S. Department of Agriculture and seed growers on the West Coast, now produces a turf which is more resistant to crabgrass invasion and which can be mowed more closely than common Kentucky bluegrass without injury.

B-27 bluegrass will be on the market in limited quantities at a high price in 1949. It represents one of the improved turf grasses brought about by research which will help all turf areas to provide better turf with less crabgrass.

Improved strains of Bermudagrass are being developed at the Georgia Coastal Plain Experiment Station, and several

show promise of providing better turf for home owners with less crabgrass because the improved strains are highly resistant to the diseases which render common bluegrass susceptible to weed invasion. In connection with B-27 bluegrass it should be noted that its tolerance to *Helminthosporium* leafspot provides a major defense against thinning and weed invasion.

Centipedegrass is coming into favor for city lawns throughout a large part of the South because research has proved that seed can be produced and that lawns can be established easily from seed. Once it has become established, and under proper maintenance, centipede lawns remain virtually weed free.

New strains of red fescue are being developed in the grass breeding program at the Pennsylvania Experiment Station. Some of these fescues are highly tolerant to close mowing and to high summer temperatures and thus remain relatively crabgrass free.

In the so-called crabgrass belt from Washington to St. Louis, the U-3 strain of Bermudagrass is finding favor on golf-course tees, fairways, athletic fields and even home lawns. It is a fine-bladed Bermuda, finer than many bentgrasses. When growing in close association with Arlington (C-1) bent, the two scarcely can be distinguished. In combination with B-27 bluegrass or with the Colonial bents, we have produced turf in the Washington, D.C., area which remains crabgrass free and virtually weed free the year 'round, with continual close mowing and no supplemental irrigation.

#### Experiments in Progress

The list of improved grasses is by no means complete. Many experiment stations over the country are joining hands with the Green Section in an effort to solve some of the home owners' age-old problems. Chemicals help, but they help most when the turf is best. Therefore we take the long-range viewpoint that herbicides have their place on home lawns only as a temporary measure to discourage crabgrass sufficiently in late

summer to make it possible to establish improved grasses which, when properly maintained, will in themselves prevent the recurrence of crabgrass. Crabgrass-control experiments are in progress at a number of experiment stations, and some of the newer chemicals offer considerable promise for discouraging crabgrass to permit the home owners to introduce other grasses.

There are a number of chemicals which may be used to discourage or to control crabgrass, but they all have one thing in common: they produce the best results when used by a specialist. Time, rate and method of application, types of grasses and weeds present and soil-moisture conditions all are factors which influence the effectiveness of crabgrass-control chemicals.

In this discussion we have no intention of attempting to instruct any home owner how to use various chemicals on his lawn to control crabgrass. Our best advice is to have the job done commercially by someone who knows his business or to consult local authorities who are thoroughly familiar with conditions. Above all, follow directions on the package.

On page 30 of this issue of the USGA JOURNAL there is an abstract of an article on weed-control chemicals which may shed some light on our attitude toward chemicals as related to crabgrass control. The foolproof chemical has not been developed, any more than a grass has been developed that grows two inches high and stops, thereby needing no mowing. Chemicals have considerable value when used as part of a sound, planned program designed to develop turf which can resist crabgrass invasion.

Few home owners follow the approved practice of seeding cool-season grasses directly into crabgrass-infested turf in the fall when frost stops the growth of the crabgrass. This is the ideal time to make these seedings. The dead and dying crabgrass should not be removed because it provides the perfect soil mulch to hold the seed in place, to retain moisture for seed germination and to provide a cover to reduce mud around the home.

## COMING EVENTS

**Aug. 30—Turf Field Day. Rutgers University, New Brunswick, N. J. Ralph E. Engel.**

**Sept. 7-8—Turf Field Day for Greenkeepers, Rhode Island State College, Kingston. J. A. DeFrance.**

**Sept. 9—Lawn Turf Field Day, Rhode Island.**

**Sept. 26-27—Turf Field Day and Golf Tournament, Pennsylvania State College, State College, Pa. H. B. Musser.**

**Oct. 19—National Turf Field Day, Beltsville Turf Gardens, Plant Industry Station, Beltsville, Md., on U. S. 1, three miles north of College Park. Fred V. Grau.**

**1950**

**Feb. 27-Mar. 2—Nineteenth Annual Turf Conference. Pennsylvania State College, State College, Pa. H. B. Musser.**

**Mar. 6-8—Midwest Regional Turf Conference, Purdue University, West Lafayette, Ind. G. O. Mott.**

All too frequently the most common practice is to wait until spring and with steel rakes remove every vestige of the dead crabgrass plants and then seed the turf grasses. This practice is designed only to encourage crabgrass. The dead crabgrass plants are excellent soil protection. The secret of success is to cover the crabgrass seeds so deeply with a dense turf established in early fall that the sun can never reach the seeds and help them to germinate.

*(Editor's Note: We will have more to say on this subject in later issues, particularly as regards fertilization and mowing of lawns, a subject which we intentionally avoided in this discussion. If reader interest in home lawns is sufficient, we can make this subject a regular feature of the USGA JOURNAL)*