

UNITED STATES GOLF ASSOCIATION

GREEN SECTION

WESTERN OFFICE



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NEW MATERIALS CONTROL CRABGRASS

Since the invention of fine turf, few weeds have been able to match the press clippings of crabgrass. It has been condemned, speculated about, cursed and discussed. But in spite of all this publicity, crabgrass grows grandly on and remains as a major problem on many western fairways today.

Ted DeTata, Superintendent of Green Hills Country Club, Millbrae, California was faced with such a crabgrass problem. Each year it seemed to become worse and despite the usual culture methods of control (some fertilization, mowing at proper heights and proper irrigation), crabgrass populations increased. Ted decided to set up his own trial plots -- to find out what chemicals (old or new) gave the best control under his conditions. Thus, the first demonstration plots in several years were established in the west by Ted DeTata at Green Hills Country Club in 1960.

In recent years, most experimental work with crabgrass has been directed toward "pre-emergence" control, i. e. the chemical is applied before crabgrass germination in the spring. Pre-emergence materials are more expensive but some fine products seem to have been developed. In fact, a few superintendents have used pre-emergence materials on their fairways with apparently very satisfactory results (Joe Martinez, Bel-Air Country Club, Fred Bove, Brentwood Country Club, Los Angeles, California).

In DeTata's test work lead arsenate, calcium arsenate, PAX (a proprietary mixture of arsenicals, fertilizers, etc.) and a new material called Zytron (Dow Chemical Company) were used. (See below for comments on other pre-emergence materials not used in these trials). The plots at Green Hills Country Club were on mixed fairway turf of bluegrass, Poa annua, some bent and considerable crab. Pre-emergence applications were made in mid-March. Superintendent DeTata sends the following report:

"Of the pre-emergence materials, we would rate them as follows;

"Zytron (M-166 Z, 6 lbs. per 1000 sq. feet) gave almost complete control. Some leaf spot appeared on the dryer plot areas during the late spring but was not serious.

"PAX was very good throughout the season but some turf burn occurred at time of application. Manufacturers recommended rates were used; 20 lbs. per 1000 sq. feet.

"The lead arsenate plots (10 lbs. per 1000 sq. feet) were good but did have a few more crab plants than the PAX plots as the summer developed.

"Calcium Arsenate (12 lbs. per 1000 sq. feet) did a fair job of crabgrass control but severe burn developed at the time of application. There were several weeks needed for recovery of the permanent grasses."

Although not included in Ted DeTata's test work last year, several other pre-emergence chemicals have been suggested for crabgrass control.

Chlordane, an insecticide, has been recommended by Experiment Stations in some sections of the country. The rate is 15 lbs. of 10% powder or 1 1/2 pts. of 72% to 75% concentrate per 1000 sq. feet. Results are rated as fair although not usually as good as other materials.

New products such as Dacthal (10 lbs. actual material per acre) and Zytron (20 lbs. actual per acre) have given very good pre-emergence control generally (up to 99%) but our information is that they will not be offered for sale in the west this year. Other new products such as Calcium Propyl Arsonate and Diphenatril will be marketed in some areas but have not been widely tested and judgement must be reserved.

DeTata's Post-Emergence Results:

Tests to control crabgrass after germination (post-emergence control) were also included in Ted DeTata's plans. This work was done later in the summer.

"I used sodium arsenite and disodium methyl arsonate (DSMA)" says Ted. "We received very good results with both materials. Two applications of DSMA (6 lbs. per acre in August) seemed to give the best immediate control. There was some tip burn but this was gone after two mowings.

"Two sodium arsenite applications in September (10 days apart) at 1 3/4 lbs. per acre did a very fine job with only slight discoloration to the permanent grasses. The lower cost factor makes this a very attractive method -- one we are seriously considering for our fairway use next year."

DeTata's Other Result:

"Regardless of the chemical used for crab control, one vital factor was observed: -- the need of adequate fertilization! Fairways have been neglected since World War II. With the introduction of cart traffic and its ever increasing use, annual fairway fertilizations and aerations will become 'musts' for the future."

MAYBE TIMES HAVEN'T CHANGED:

Last January, when Dr. John Monteith, Jr. accepted the first United States Golf Association Green Section Award - "For Distinguished Service to Golf through Work with Turfgrass," he recalled the early days of Green Section activities. One of the major problems confronting turf works (and golfers) was that of worm casts on greens. One can hardly recall today how active earth worms used to be in putting greens soils. Golfers continually complained of putts being diverted from the cup

by worm casts. "But during all of this time," reported Dr. Monteith, "I never received one complaint nor did a golfer ever give credit because a worm cast had deflected his ball into the cup."

SEASIDE BENT VS PENNCROSS:

Controversy over the virtues of Penncross bentgrass as opposed to Seaside bent will probably go on and on. But experience is adding to the data favoring Penncross! Take the following for example:

Three years ago, two new greens were built at the Santa Ana Country Club, California. Both were constructed in the same manner, with approximately the same type of soil and within 100 yards of each other in the same sunny area. The only difference was in seeding one to Seaside and the other to Penncross bent.

Three years of observation should give some inkling as to the progress of the two grasses. Superintendent Joe Williams reports that the Penncross green has had far less Poa annua invasion (from 15% to 20%) than the Seaside green (from 70% to 75%). Penncross has retained better color and more uniform putting qualities through the year. What about mat formation and wearing ability of these two greens? "To date, Penncross is the winner on all counts," states Williams. ----- Bill Hood, Superintendent of Stockdale Country Club, Bakersfield, California reports similar experiences.

A DIFFERENT WAY TO TEST "NEW" MATERIALS:

Hardly a month goes by for the superintendent without having someone stop by with a new fertilizer, new wetting agent, new soil conditioner or possibly a new "cure-all" of some kind. And this is good. Most superintendents will accept a sample, divide the recommended rate in half and apply it to a part of their nursery area.

But such a test is not for Cliff Wagoner, Superintendent at Del Rio Country Club, Modesto, California. Cliff believes a better test is to double the recommended rate and try that on the nursery area. The recovery of the resultant burned turf holds the clue as to future possible use of the material on Cliff's course. If the double rate is too severe -- kills everything or if recovery is slow -- he feels the material is too strong, a real danger under practical working conditions and not for him!

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In science the important thing is
to modify and change one's ideas
as science advances.

Claude Bernard

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