

IF...

YOU OWN OR OPERATE A:

Pro Shop
Golf Course
Driving Range
Par-3 Course
Miniature Course

... SEND NOW,
FOR OUR

New 1973 64-page Wholesalers Catalog of Golf Supplies

Balls, clubs, club repair supplies, tees, mats, pails, markers, retrievers, golf bags, obstacles, ball washers, ball pickers, electric bug killers, ball striping & painting, supplies, grips, nets, shoes & accessories, umbrellas ... and more!

 **Eastern
GOLF COMPANY**
2537 Boston Road (Route 71)
Bronx, N.Y. 10467

For more information circle number 145 on card

MONTEX GOLF CAR

One of the best fleet golf cars on the market today is now available to golf car dealers and golf course owners throughout the country.

Starting from zero in 1971, in Florida, we almost matched our competition the first year and out-sold all the golf car companies in our territory by better than 2 to 1 in 1972 (list of sales available by written request).

Montex Golf Car production has increased enough so now you can have this golf car on your golf course. Join the winner. Call (305-395-4414) or write for further information.

Lew Montgomery, Inc.
145 N. W. 20th Street
Boca Raton, Florida 33432

For more information circle number 172 on card

DR. JAMES B. BEARD



TURFGRASS RESEARCH REVIEW

POA ANNUA: CONTINUED RESEARCH

Research notes—the Poa annua problem. G.S. Harris. 1972. New Zealand Institute for Turf Culture Newsletter N. 78. pp. 54-55. (from the New Zealand Institute for Turf Culture. P.O. Box 725, Palmerston, North, New Zealand).

The paper describes some experiments conducted on a bowling green in New Zealand concerning annual bluegrass seed production. The approach involved the collection of seed by means of a large commercial vacuum machine, which was operated over the entire surface of a full size bowling green at intervals of two to three weeks for a four-month period during prime seed production. The seed, sawdust and surface debris were removed by the machine and collected in a large filter bag. The collected material was subsequently run through a seed cleaning machine and a subsample counted to determine the number of seeds present. Appropriate calculations were made to determine the total number of seeds removed by this method.

The results show that there were roughly 5½ million seeds removed from the bowling green area during a four month period, equivalent to approximately 2½ seeds per square inch. This represents the number of seeds left in the immediate surface area after a substantial number of seeds had been removed by the mowing operation involving a catcher. Thus, a sizable quantity of annual bluegrass seed will accumulate over a period of years. To confirm this situation another experiment was conducted to determine the number of annual bluegrass seeds buried in the surface soil zone of the bowling green. Counts from the same green indicated that there were approximately 72 seeds per

surface square inch present in the top one inch of the soil. Approximately 50 per cent of these seeds were within one-quarter inch of the surface.

Comments: The above paper illustrates the prolific seed production capability of annual bluegrass (*Poa annua* L.). An earlier study in western British Columbia showed that one annual bluegrass plant produced 360 seeds between May and August. Extensive seed production can occur even at a cutting height of 0.25 inch. In the United States, seed production of annual bluegrass occurs throughout the entire year, but is most prolific during the month of May when flower development can reduce the quality of the putting green surface.

Not only is annual bluegrass a prolific seed producer, but it also has the unique capability to ripen and produce viable seeds within one to two days after pollination. It should also be kept in mind that not all strains of annual bluegrass are comparable in terms of prolific seed production. There are perennial, creeping types that have minimal seed production, and the seed that is produced has a limited dormancy factor. This contrasts with the annual, bunch types, which are extremely prolific seed producers with a high percentage of the seed possessing a dormancy factor. The term "dormancy factor" means that the seed can remain in the soil for an extended period of time, even under favorable moisture and temperature conditions, without germination occurring. This characteristic along with the prolific seed production and capability to produce viable seed within one to two days after pollination enable annual bluegrass to survive and persist under a wide range of environmental, soil and cultural conditions. □