

AERIFICATION AND EFFICIENT TURF MAINTENANCE

This article is an abstract of the West Point Lawn Products publication, **AERIFICATION AND EFFICIENT TURF MAINTENANCE**. The original article is a summarization by Charles K. Hallowell, Extension Agronomist, Pennsylvania State College, of a discussion by the Philadelphia Association of Golf Course Superintendents at their meeting on December 11, 1950. This meeting was the third consecutive year that superintendents in the Philadelphia area met to discuss this vital subject which included who should aerify, why aerify, when to aerify, what to aerify and how to aerify.

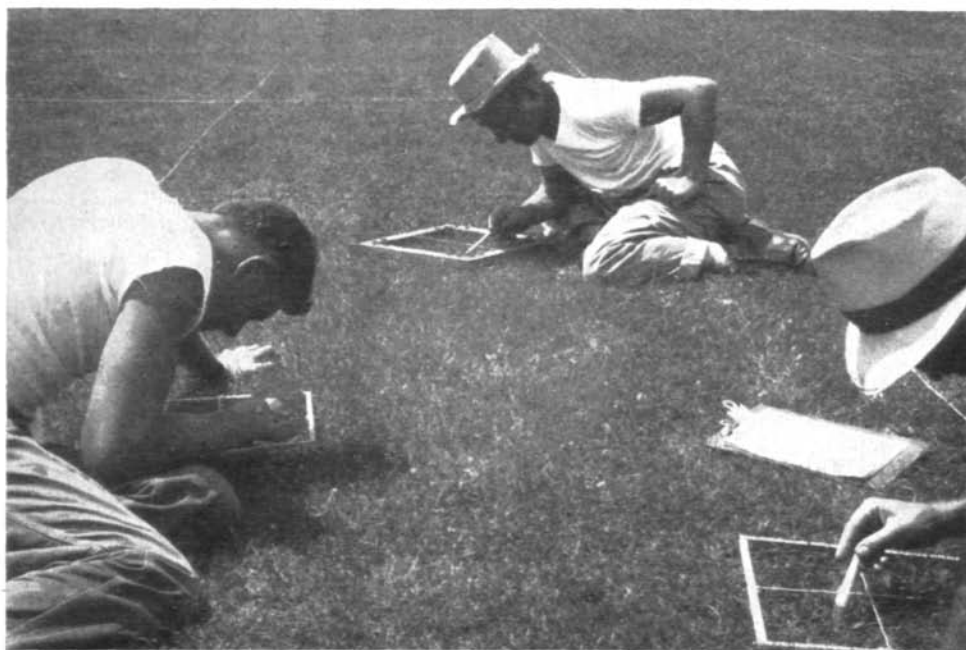
Aerification was credited with reducing disease; conserving water, fertilizer and seed; increasing root penetration; assisting air movement in the soil; reducing thatch; overcoming compaction; being essential to renovation; and providing more satisfactory playing conditions.

The group consensus indicated that aerifying should be done whenever needed throughout the playing season on every type of turf area, keeping in mind that it should be done when it will cause the least inconvenience to the players. Aerification is essential to fall renovation and in tests on aerified and unaerified turf there has been no significant increase in weeds on the aerified portions.

Depth Setting Varies

When aerifying the cultivation depth should be as great as possible without unduly marring the surface. Soil conditions and turf density greatly affect the depth setting. Soil should be moist, and shallow-rooted turf may be damaged more severely than deep-rooted turf when using full cultivation depth. Increased aerification improves root depth, thus allowing deeper depth settings. The number of times over a given area depends on the

Some Day This Will Improve Your Course



Counting crabgrass plants in the USGA Green Section's Beltsville phase of the National Co-ordinated Crabgrass Trials. These plots are co-operative with the Pennsylvania State College. Counters, left to right, are Bob Elder, Al Radko and Charlie Wilson. It is tedious work, but accurate data, intelligently applied, results in the perfect conditioning golfers expect.

job to be done. Renovation requires many aerifications. To improve soil and root depth aerify twice or three times over, or once over and repeat every three to four weeks. Each spoon size (1-inch, $\frac{3}{4}$ inch, $\frac{1}{2}$ inch) has its place. Where putting green turf is well established the $\frac{3}{4}$ inch spoon may be used. Shallow-rooted turf requires greater care, thus indicating the use of $\frac{1}{2}$ inch spoons.

Finishing operations must be done properly. Soil on the surface can be distributed by dragging with a wire mat or poling, or if soil is poor, the cores may be removed with a leaf sweeper. Rolling may be necessary to restore a true putting surface; mowing will remove any tufts of grass; and in dry weather careful watering should follow aerification.

The article further emphasizes the importance of aerification in protecting a golf club's investment by bringing about greater economy through greater efficiency when maintenance must be cut to a minimum.

Benefits of Fall Aeration

Those readers who have carefully digested the above excerpts will realize the need for aerification on their turf installations this fall. Results from all over the country indicate that there is no better way to establish a seedbed in existing turf. The myriads of pockets made by the use of an aeration machine catch and hold fertilizer, seed, and mois-

ture. Conditions for germination are ideal, and, of course, the pockets serve as protection for the tender young seedlings until they become established. Turf authorities from many states inform us that knolls or humps on rolling fairways no longer present a problem toward seed and fertilizer placement when an aeration tool is used. Again, the pockets formed catch the seed and fertilizer under the heaviest of downpours.

Bentgrass greens are growing vigorously in the fall of the year, and thus heal rapidly the slight scars made by aerating. In areas where snowmold presents a problem, superintendents inform us that an open, well-ventilated green during the winter months is much less susceptible to attack. Dollarspot control often is adversely affected by excessive mat. Fungicide applications, supplemented by additional feeding and aeration, have proven of great value in overcoming this problem.

Entomologists tell us that long-lasting control of insect grubs is dependent on deep placement of the insecticide. Aeration before application will give the desired placement.

Today it is universally accepted that good management practices employed in the fall may mean the difference between success or failure the following season. Aerification is associated with most management practices.

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FURTHER SUGGESTIONS FOR RESEARCH ON POA ANNUA

By FRED V. GRAU

DIRECTOR, USGA GREEN SECTION

The large question of POA ANNUA — FRIEND OR FOE (in the USGA JOURNAL, June, 1948) is receiving more and more attention as we see the possibilities in some of the improved turf grasses which are being developed under the National Co-ordinated Turf Programs.

The question is: "Are these new grasses good enough to replace poa where they are managed properly?"

The development of new improved techniques in the cultivation and aeration of soil under turf has led some to wonder

whether these operations tend to encourage or to discourage poa. These questions can be answered only by repeated testing under many conditions backed by actual population counts made by trained research personnel.

This, then, indicates clearly the great need for the superintendent on the golf course to offer the facilities of his club to the research man at the experiment station. At Beltsville, for example, the Green Section staff can do no research on *Poa annua* at the Station because in our un-