

start their work at the same time that leaves reach full size, it is possible by this spraying program to prevent them getting a start and, by so doing, have the trees reasonably free from insect and fungous pests during the remainder of the growing season. However, in certain cases, this one spraying is not sufficient to protect over a long period of time and unless subsequent sprays are given, considerable damage may be done and the benefit of the original spraying lost.

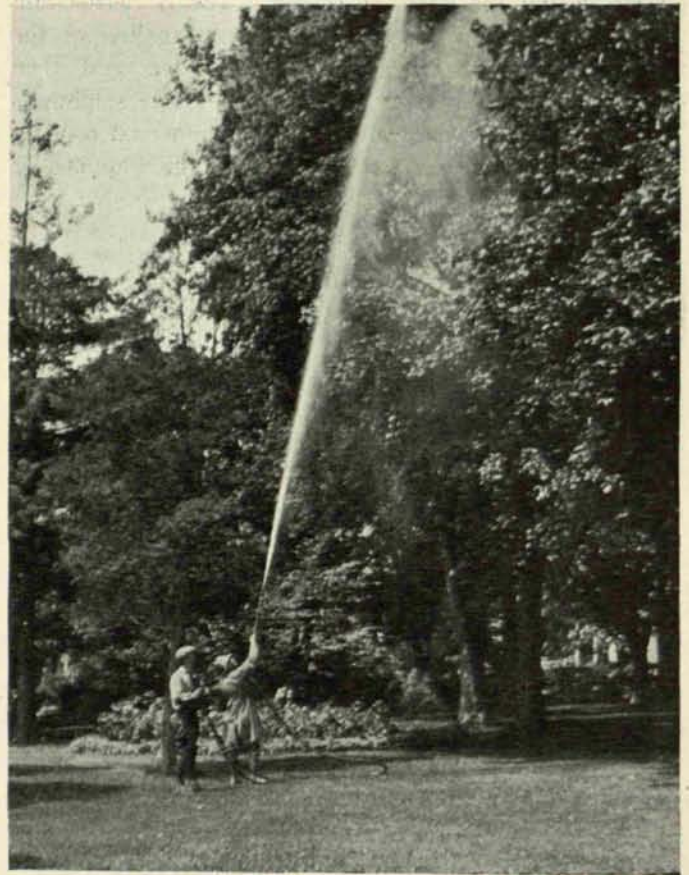
Not always is it necessary to include a fungicide, such as copper and lime or sulphur, in a spray mixture. Some trees are seldom attacked by fungous diseases and, when this is true, one need make no preparation for preventing them. Under such conditions, the arsenate of lead and the Black Leaf "40" may be applied to control the insects alone.

Have Fungous Diseases Diagnosed

At the same time, some trees have fungous diseases which start at other times than those indicated in the preceding paragraphs, and under such conditions it is necessary to apply special sprays for preventing these fungous diseases. Since a lot of time, money and energy can be wasted in spraying improperly, it is always best under unusual circumstances to get the advice of someone versed in spraying so that the expenditures may be made most effectively.

Spraying must be done thoroughly in order to secure the results desired. I know of few operations which can be more dismal failures than spraying which is done either ignorantly or carelessly. It is always well to seek reliable advice and then follow that advice in spraying

problems. By so doing the freedom of the trees from insect and fungous pests can be reasonably assured.



A special spray nozzle in action reaching to the top of high trees. Applying the three-in-one mixture described on preceding page for control of blight, aphids and canker worms

Vegetative vs. Seeded Greens

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ANY discussion of this topic involves in an argumentative way a consideration of bent grass versus the other fine turf grasses suitable for putting greens.

Comparing Turf Characteristics

The characteristics of bent are, briefly: aggressive, rapid, spreading growth under anything like favorable conditions, which in itself removes one of the greatest detriments to a good putting surface, namely weeds; giving playable sward at a reasonably early date after planting, which constantly improves with no further planting; development of fine turf in one season, which makes an even fine mat of fine putting quality, homogeneous texture and color. In addition, bent is dependable and self-healing.

In the case of Redtop, fescue, and other grasses which are usually planted in seeded greens, constant weeding, occasional re-seeding, and expert attention will make of them very suitable putting greens.

The characteristics of the resultant turfs would seem to favor bent, if characteristics are to be considered alone. If other items are to have our consideration, we are immediately involved in the progress between the planting period and the time the turf is matured. To investigate these items, let us scan the processes separately.

Preparations for Planting

The preparation of the soil can, and should be, practically the same, with the exception that bent stolons can be planted when the soil is in a wet condition; whereas the sowing of grass seed is better accomplished when the seed is raked into dry, powdered soil, since seed is more evenly covered under dry conditions and the germination is more uniform.

Getting Bent Ready for the Mower

After the soil is prepared, bent stolons should be cut into pieces something over an inch in length and lightly



Open Championship 1926 at Scioto Country Club, Columbus, Ohio. Joe Turnesa, playing from behind bunker at final hole afternoon round

but evenly spread over the surface, approximately one-tenth as thick in quantity of stolons as the nursery stock grows per square foot in good soil and favorable climatic conditions. A sufficient quantity should be allowed to insure at least one joint or node to each square inch of surface. This planting is covered by hand, unless some practical mechanical means are used, to a depth of one-eighth of an inch, depending upon the texture of the soil, available moisture, etc. After the stolons have been rolled as flatly as possible, the top soil cover is applied and rolled to press the soil firmly about the nodes. The green is then kept moist by means of a fine spray which prevents washing, for a period of several days. Stolon plantings should never be allowed to become dry at this stage. A few weeks of growth, if fall planting is done, will result in a well covered green, with the new root stocks commencing to spread, when the cold weather sets in. If late spring or early summer planting is done, the grass will rapidly spread into a luxuriant tangle of rugged matted grass blades and runners.

Bringing Bent into Play

After these stolons have started to tie down, or re-root, and after judicious rolling, the grass should be cut. Not too closely, but close enough to allow a good top-dressing to cover the stalky runners and yet not smother the grass blades. From this time on, continuous cutting at regular periods, and two or three top dressings rapidly smooth and polish the greens into putting form.

The usual processes of fertilizing, periodical treatments of Ammonium Sulphate, and careful watering will soon age the grass into turf. This top dressing, fertilization, watering and rolling is comparable to that done in the care of seeded greens. The big difference lies in the seeding, which after the first cutting is practically nil.

From Seed to Putting Turf

In discussing the seeding method of producing turf, the amount of seed to use for a given area, and the kinds of seed to use, depend upon local soil and climatic conditions to a certain extent. However, the soil preparation is the same as for planting stolons, and the seed should be thoroughly raked to cover, dry soil preferred, as before stated. Thereafter, the soil should at all times be kept moist but not wet, especially if the temperature is low.

From the time germination takes place, and the grass starts to grow, the usual care should be taken of the newly planted greens, namely, watering, fertilizing, rolling, top-dressing, etc., comparable with the care of bent turf, including constant periodical cutting.

The seeded greens should be carefully weeded then, and thereafter, in order to reduce the strangling of any of the seedlings. Herein lies the difference in the development cost and progress between seeded and vegetative putting greens.

Because there is a continuous seeding to weeds in putting greens which have been planted with grass seed, the weeds have a fine chance due to their rank growth, to usurp sunlight, food and moisture needed by the growing grass. In the case of bent grass, this is not so true, because the grass near to the weed growth is easily fed by its runners which reach out in several directions. Therefore the weed is the victim eventually, since it is constantly cut and can only secure nourishment from one root location.

Why I Choose Bent

The items to be considered in the discussion would then seem to be:

- First: Planting Costs
- Second: Development Costs
- Third: Development Time
- Fourth: Relative Results

Relative results have been discussed all over the country, and are now-a-days considered to be in favor of the bent grass.

Development time, which of course is an important item, particularly so when golf club members are aching to play and the greens are being re-planted, is in favor of the bent.

Development cost, due to the labor cost of weeding, favors bent.

Planting costs, however, favor seed, but this item is nowhere nearly as large as the development cost of a putting green, as in maintaining a seeded green the weeding cost soon mounts above the difference in cost of planting.

Wherever it is practical to follow the method of planting bent vegetatively, it is undoubtedly true that such a green more than pays for itself in the reduction in cost of maintenance and in the production of a really fine putting surface.