

OCTOBER

1932

VOLUME VI

NUMBER X

The NATIONAL GREENKEEPER

Official Organ of The
National Association
of Greenkeepers of
America

Fall Seeding Of Southern Greens

Correct fertilization before seeding insures better turf for winter play. Careful watering is necessary.

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THE hazardous period for winter greens in the South is the first few weeks following seeding. Severe injury, in some cases involving complete loss of the tender young seedlings, occurs during periods of hot, humid weather. In extreme instances it becomes necessary to re-seed, and after that satisfactory coverage is not always obtained by the time winter play begins. Once a good stand of well-rooted grass is established subsequent maintenance is comparatively simple.

Local injury is attributed to brown patch. Unquestionably a fungus is the underlying cause, and the effects closely resemble what is generally referred to as "damping off." Aside from fungicidal control, there is evidence to support the belief that cultural practices preceding and following seeding will eliminate, or at least minimize the damage.

BERMUDA GREENS MUST BE SEEDED

TO PROVIDE green grass for winter play it is necessary to seed Bermuda greens with rye grass, red top and Kentucky blue grass in the late fall. The usual procedure is to rake and cut the waning Bermuda close, fertilize generously, seed and finally topdress to cover the seed. The aim seems to be to produce puttable turf in the shortest time possible.

The attempt to rush initial growth to insure rapid coverage accentuates the natural tendency of grass



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seedlings to produce soft succulent leaves. The fact that tender leaves are associated with seedling growth of all grasses is common knowledge, and in this respect rye grass is the worst offender. Cultural practices which tend to offset this natural tendency, and produce harder leaf structures offer the greatest hope of overcoming loss of grass. This is largely a matter of correct fertilization prior to seeding, and then careful watering until a satisfactory turf is obtained. Such a program may slightly retard initial growth, but will not materially lengthen the time required to secure satisfactory coverage.

Too generous use of nitrogenous fertilizers prior to seeding has been a fatal mistake. Nitrogen is the growth element. In abundance it produces deep green color and soft leaf tissues; hence its use accentuates the seedling tendency to form tender leaves. For this reason nitrogenous materials should be withheld prior to seeding. The nitrogen stored in the seed supplemented with the small amounts furnished even by a relatively poor soil are sufficient to permit establishment of the seedlings. Logically nitrogen feeding should begin after a turf is formed.

BERMUDA MUST BE TREATED CAREFULLY

THE scheme inevitably fails if Bermuda is fed heavily right up to the time of seeding or if a rich compost is used for topdressing. Any residual

nitrogen not taken up by the Bermuda, or the supply furnished in the compost will have the same effect as any nitrogenous fertilizers actually applied. To avoid these effects fall feeding of Bermuda should be reduced to a point where this grass shows slight signs of nitrogen hunger, and a topdressing made up of poor soil and sand, or marl and sand in Florida, should be used to cover the seed. Where peat and muck are customarily included in topdressing mixtures they should be omitted from this dressing, in order to eliminate any possibility of their serving as a medium for the development of disease-producing organisms.

Winter grass seedlings produced from seed certainly require more phosphoric acid than Bermuda, and possibly potash also, especially on sandy soils. Abundant phosphoric acid very markedly stimulates root development, the first essential towards developing turf from seed. Further, both these elements tend to produce sturdier tissues, and thus partially offset the unfortunate tendency of seedlings to produce weak stems and leaves. These are the principal reasons why phosphate and potash fertilizers should be used before seeding.

Possibly phosphate and potash applications should be sufficient to satisfy the limited demands of Bermuda for the ensuing summer season. Bermuda greens are objectionable because of coarse, stubby stems and stiff leaves. Since phosphates and potash accentuate this natural tendency, their use should be limited to amounts barely required for growth. Nitrogen fertilizers should be depended upon to produce active vegetative growth during the playing season. Even nitrogen can be overdone because in abundance it tends to produce broader leaves.

SUPER PHOSPHATE STIMULATES ROOT DEVELOPMENT

SUPER phosphate is the best source of phosphoric acid. Because of its solubility it is quickly available and thus exerts the most marked effect in stimulating root development. For potash, either muriate or sulphate of potash both containing fifty per cent actual potash are satisfactory materials. From ten to fifteen pounds of twenty per cent super phosphate and two to four pounds muriate or sulphate of potash per thousand square feet produces desired results.

If a mixed fertilizer is preferred, twenty pounds per thousand square feet of an 0-10-10 supply the

same amount of phosphoric acid and potash as ten pounds of twenty per cent super phosphate and four pounds muriate of potash. In order to prevent any possibility of burning, it is best to apply the fertilizer a few days in advance of seeding and water in.

As mentioned above the topdressing should be almost devoid of plant food, and consist largely of sand with just sufficient heavier soil, or marl to give the mixture body.

OVERWATERING IS A MISTAKE

THE tendency on some courses has been to overwater following seeding. There is no denying the fact that sufficient moisture must be supplied to permit germination and initiate growth. Yet plentiful water accelerates growth, produces tender leaves and accentuates development of disease-producing organisms. Hence the aim should be to supply just sufficient water to permit growth without forcing the young seedlings.

To summarize briefly, it is suggested that too generous use of nitrogen prior to seeding, and failure to supply phosphoric acid, and sometimes potash accentuate difficulties in obtaining a satisfactory stand of winter grass. The plan suggested calls for lessened feeding of Bermuda in the fall to a point where this grass shows slight signs of nitrogen hunger.

Prior to seeding omit all nitrogen, and supply phosphoric acid and potash in amounts equivalent to 10-15 pounds of twenty per cent super phosphate, and 2-4 pounds, fifty per cent muriate of potash. After the turf is formed, feed nitrogen during the playing season in amounts sufficient to maintain color and growth.

The topdressing used to cover the seed should be devoid of plant food, and consist of sand with sufficient heavier soil, or marl to give it body. Likewise muck and peat should be omitted from this one dressing. Apply sufficient water to permit germination, but avoid excesses which exert unfavorable effects on growth, and encourage development of disease organisms.

This scheme has been successfully used at Gulf Stream Golf club, Delray, Florida, by M. L. DeParlier. While Kentucky blue grass is used, the same fundamental principles apply to rye grass and red top, except that the initial growth of these grasses is naturally more tender.