

ber 1 for the Northern latitudes) and the ground permitted to remain fallow for about two weeks.

It should then be prepared for seeding. If the area is not ready until mid-summer, grow only one cover crop, and if it should be fall before any work could be done on the lawn area, sow winter rye to plow in early spring to be followed by two more cover crops. If the soil contains over twenty-five percent clay, one application of lime at the rate of fifty pounds per one thousand square feet of surface will be of great benefit.

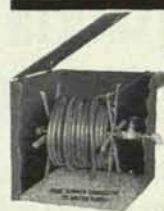
On soils capable of growing a fair vegetable garden cover-cropping need not be practiced, but it is very necessary on sandy or clay soils. In all cases the seed bed should be fully prepared in the fall, if possible in time for fall seeding and if not for spring seeding on the "honey comb," when the top is thawing and freezing.

All soils are improved by the addition of manures, and often they can be substituted for cover crops. The only factor against the use of manures is their unknown weed seed content. However, this liability need not be very serious if the manure is applied several weeks before seeding time, for a great majority of the weed seeds will have germinated and the young plants will be destroyed in the final preparation of the seed bed. It is far better to harrow the manure into a lawn surface than to plow it in.

PREPARING THE SEED BED

IN preparing the real seed bed (bed covers) the molded lawn should be thoroughly harrowed or shallow spaded. Grade strings should then be re-strung and the entire area raked with iron rakes. This raking should not only remove stones and debris, but should smooth out any unevenness and round off all sharp corners caused by abrupt bending of the grade lines. The raker should be cautioned to do as much "pushing" as "pulling" with his rake, otherwise there will be an excessive accumulation of loam at the lower part of the area.

Experience teaches (though it is seldom practiced) that it is better to rake up the slope than down it, for the same reason. As soon as this raking is completed and the area appears ready for the seed, roll the area with a medium heavy roller. Unexpected hollows and hills will appear, lumps of earth will be crushed and the temptation to seed after the first raking is alleviated by the obvious necessity for another raking. This raking, the final



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one, should be done with a wooden lawn rake. It should effectually smooth the surface and loosen the soil to a depth of at least three-quarters of an inch, leaving a soft, open clean and thoroughly pulverized seed bed.

If one desires to use a pre-seeding fertilizer other than the manures, super-phosphate at the rate of sixteen pounds per one thousand square feet will be found to be very helpful to the young grass plant. This should be incorporated into the soil with the first raking.

Golf Course News

A column of information brief and accurate.

Items are welcome and will be published.

NEW ENGLAND NOTES

By GUY C. WEST

GOLF in New England this spring has been largely very dependent upon the weather. Following a rather open winter when most courses used their regular greens at all times, April brought a very excessive rainfall, and the result was flood conditions, with many courses suffering from flooded lowlands, soggy fairways, etc.

The "No Play" signs were hung out in many clubs due to these wet conditions, and even the best of drainage facilities were taxed on all clubs.

The Greenkeepers' Club of New England held its last indoor meeting of the season on April 3 at the Hotel Statler, Boston. Dr. Howard B. Sprague of the New Jersey Agricultural Experiment station was the speaker, and explained interestingly the various experiments conducted recently and the results obtained from them.

The annual Field Day for greenkeepers at the Rhode Island State College will be held this year on May 22. Exhibits will be limited to the small equipment. A trip to the experimental plots and a speaking program following lunch will complete the program.

Arthur W. MacLean, formerly assistant greenkeeper at the Kernwood Country Club, Salem, Mass. has recently been appointed greenkeeper at the Brattleboro Country Club, Brattleboro, Vt.

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Ornamenting House Grounds

By L. C. BREED

THE surroundings of the house can be made attractive by carrying out some of the following suggestions. Among the means of accomplishing this, the first step would be to have some small evergreen trees or shrubs not over six feet high, planted near the entrance to the grounds and continue them along the passageway to the house.

Three trellies should be placed on the house near the entrance to it. One of them could be used for clematis, which is a charming flower with other qualities to recommend it for the garden. It makes a good display when used on a trellis and flourishes under ordinary conditions.

The second trellis could be used for rose, which, besides its beauty, is an excellent climber and is a hardy flower. The third trellis could be used for wisteria. Among flowering vines, besides being attractive, it is found that these hardy vines will outgrow nearly all kinds of climbers. They will reach the second sometimes the third story of a house.

Placing window boxes on the house furnishes another pleasing feature and affords an opportunity to use several kinds of flowers.

If a pool is provided, some water lilies and other pool flowers will flourish. These flowers require but little care further than to see that the pool is kept clean.

A garden plot on the sunny side of the house could be used in which to grow flowers such as gladioli, dahlias, daffodils, petunias and other favorites.

Bird houses placed on poles add variety to the garden features. An additional novelty is bird baths. Some of them are made to look like a huge mushroom.

It is noticed that fruit trees furnish a striking contrast among other trees on account of the brilliant colors of their blooms. These are desirable for display, independent of their fruit.

There is a tree which recently has been introduced from China that is known as the "Hurry tree" on account of its rapid growth. This renders it very useful if wanted for shade in a short time.

Golf Course News

(Continued from page 9)

FROM THE SOUTH

By MERLE ZWEIFEL

THE Oklahoma A. & M. College of Stillwater, Oklahoma, is making an extensive study of grasses adaptable to golf courses and estates in Oklahoma. This program is being aided materially by the assistance of Prof. H. J. Harper of the Agronomy department.

Prof. Harper has been engaged in considerable research work with the bent grasses and at the present time is making a thorough study of brown patch and other fungi diseases that attack bent grass. He believes that within a short time he will be able to give the actual cause of brown patch and a complete explanation of the fungi family from which it originates.

Assisting him in the research are professors Roff and Henderson of the Botany and Entomology departments respectively.

WHEN the winter blizzards sweep down upon the state of Oklahoma it usually brings a thick blanket of snow which affords protection for Bermuda grass fairways and tees. But last winter seemed to be an exception.

During the month of February a severe cold wave brought icy winds and zero weather but no snow and although fairways throughout the state are beginning to show green, there are numerous ugly spots on most of the Bermuda fairways.

Nature leaves Bermuda in the fall with a thick coat of straw for protection but late fairway mowing forces the grass to go through the winter with no covering whatever.

PACIFIC COAST GOES ECONOMIC

By ARTHUR LANGTON

A SYMPOSIUM on how to maintain an eighteen-hole golf course with the assistance of three men or less could be compiled from the daily doings of a score or more Pacific coast greenkeepers.

What is astonishing is the fact that the layouts so short-handed are able to provide playing conditions of any kind, let alone of a quality sufficiently good enough to attract a few paying players. Yet a brave attempt is being made throughout the length of the Coast.

GREENKEEPERS themselves are attacking the situation with philosophic calm. As one expressed the situation, "It really doesn't make any difference, one man more or less, after you get below five. There is too much for everybody to do." Another voiced the hope that club officials would leave him with at least one man, because he wanted someone to talk to.

HERE seems to be a bright side, however. The less water that is applied, the less grass will grow to require cutting. And as more turf is neglected, there will be less to require either cutting or watering. This will narrow the fairways considerably, forcing players to improve the accuracy of their game. Thus everybody will be benefited.

But depression or no depression, on the Pacific Coast as elsewhere, the golf courses which are getting the play are those which are maintaining a high standard of course upkeep.

CANADIAN GOSSIP

By J. H. EVANS

WITH only the usual routine, superintendents of golf courses in eastern Canada were able to offer courses in excellent condition for golf by Good Friday.

A mild winter with little frost followed by a spring with no frost, warm weather and no rain were the factors which contributed to the fine condition of courses when golfers returned to them during the Easter vacation.

Practically every club was able to provide a permanent course before Good Friday, which is somewhat earlier than usual. In so doing, course superintendents

and greenkeepers carried out their annual task without a problem of any consequence.

WITH a trying season before them, greenkeepers were pleased that the season opened without presenting the possibility of unexpected expenditures to meet damage incurred during the winter months.

President W. J. Sansom of the Ontario Greenkeepers' association, expressed the opinion that none of the clubs would be involved in more than the ordinary expenditures this year and the hope that none would resort to economies other than those forced on them last year. He was satisfied that clubs realized the necessity of maintaining courses in a proper manner.

President Sansom further announced that the program for the association this year would be along the same lines as last year. Monthly meetings could commence in May and continue until the fall, possibly closing with a meeting at the Royal York course to observe the result of experiments with various types of grass.

Last season a successful gathering—the first of its kind—was held at the Royal York course with officials of the Royal Canadian Golf association and the Green section of the United States Golf association present.

Ten Years With a Turf Nursery

By GUY C. WEST, *Superintendent*

Fall River Country Club, Fall River, Mass.

TEN years ago the turf nursery was not thought to be necessary to the average golf club, but today there are few clubs which do not boast of at least a few square feet of sod which can be used for patching.

The various types and strains of bent grass which have been used in the past ten years are reflected in a ten-year history of our turf nurseries at the Fall River Country club. Such a history represents somewhat of an evolution, and is of interest to all interested in turf. The telling of this history must of necessity be somewhat personal, and I hope I may be pardoned for telling it in the first person singular.

When I assumed the duties of superintendent at the Fall River Country club in the late summer of 1922 there was no turf nursery. Following the vegetative planting of some new greens shortly after my arrival, I found that we had a bushel of grass left, and had it planted in an out-of-the-way place. This was the first turf nursery here, and the

grass, bought by the Green Committee for Rhode Island bent, proved to be a strain of a Seaside bent.

In the spring of 1923 I seeded about half an acre to Rhode Island bent, and it is significant that we used all of this sod in the next few years, mostly for fairway patching.

EXPERIMENTS WITH VELVET BENT

ALSO in 1923 I started experimenting with various strains of bent, mostly velvet, which I found growing in various parts of the course. These were grown in nursery rows and then planted in plots the year following. I have kept these year after year, discarding some as they proved undesirable for any reason, and now have but two of the original strains.

In 1924 the Green section recommended the Virginia strain of creeping bent highly, and I secured some of this, and worked with it considerably for a few years. It did not prove desirable with us, and hence was discarded a few years later.

In 1925 I received some samples of Washington