

I'VE got Dots before my eyes—and it's wonderful! But our Pro says this is no time to dream, even about something as sweet as a big, beautiful Spalding Dot. He says we'd better keep on turning in old golf balls.

"I like his system, because he swaps them with Spalding. I figure that anyone who can make a golf ball like the Dot, must know more than a little about reprocessing."

Note to Pros: Round up old golf balls now—send them in to Spalding—you get back an equal number of reprocessed balls (less rejects, of course) at any time you name!

A. G. SPALDING & BROS., DIV. OF SPALDING SALES CORP.

Spalding Sets the



Pace in Sports

Spalding

GOLF BALL SALVAGE PLAN



FLYER
(Pro only)



WAR-FLITE



BOMBER



RECRUIT

British Golf Carries On

By HERB GRAFFIS

LONDON—British golf will experience a tournament revival in 1945 that according to promise of discussions in mid-October will return the British open and amateur to the calendar of championships. The English Golf Union plans to hold the Victory English amateur championship next year. The Ladies Golf Union and the Professional Golfers Assn. also are confident of renewing their championships next year.

There has been some talk of the English amateur being changed from match play as it was before the war to stroke play. Pros who have been queried on the type of play their championship will have are unanimous in favor of retaining match play. They are the older men and naturally would favor the system that was in vogue before the war virtually halted pro golf competition with the exception of exhibition matches for war funds. Younger pros have had very little play or practice during the five years Britain has been at war. The majority of them have been away in combat operations and the remainder have been assigned to home defense or factory duties by the nation's comprehensive draft of manpower under 50.

British newspapers carried a few paragraphs of their very tight sports section space on the American pros' controversy about their PGA championship being switched to a medal play event. The defeat of Nelson in the final of this year's American pro championship was considered a sharp upset by British pros who've had an opportunity to watch Byron in action. They regard him as the peer of the world's golfers but don't believe that the loss of one match by even the best of players should be considered as valid reason for altering the character of the title tournament. They ride along with Hagen's expressed view that match play is a tougher test of championship ability and temperament than medal play.

It's the opinion of several of the older British pros that the American PGA by relinquishing match play championships would make the pro title competition definitely a second rater to the National open whereas now the different styles of play make the two events equal in testing championship calibre.

About the capacity of British championship golf to come back on a basis comparable to that of American scoring, the older British pros are not entertaining any optimistic thoughts. They are in-

clined to believe that it will take at least five years after demobilization to develop British amateur or pro talent to the point where it can crowd the better American players. British women, like the men, have been so deeply engaged in war work that they are lucky to get a round at remote intervals. This, despite the British conviction that holidays out of doors are a necessary part of living, even under the enemy's bombing and cross channel gunfire.

There has been practically no golf for younger boys and girls in England and Scotland during wartime hence a generation has been skipped in developing British golfing talent. Nevertheless, the zest for the game seems to have continued and may result in British golf giving more planned attention to the encouragement of youngsters' golf than has been given the kids' department of the game in the past. British pros hope that this will be the case. They have seen in the swings of American soldier and sailor golfers, who manage to get a few rounds played on English and Scottish courses, indications of a higher standard of play than was apparent in prewar days when the visiting American businessman was taken by his host to a British course. This, the British pros are certain, is due to the American pros' activities with childrens classes about which the Scots and English have learned by letter from friends in pro golf in the states and by golf magazine references.

Possibly this hunch is stronger than actual extent of kid lessons in the U. S. warrants. Many American young men who have had opportunities to play in Britain picked up their games by imitation of some American pro rather than by class or individual instruction.

American airmen have been the most active visiting golfers in Great Britain, primarily due to so many air establishments being located not many miles from golf courses and secondarily due to golf being ideal compensation for long trips in the cramped quarters of planes and the mental strains of aerial warfare.

War in the air is reflected on British courses by craters where enemy bombs have been jettisoned or dumped in bad aims, and by heavy poles being set in the fairways to prevent use as enemy plane landing strips. These poles have made obsolete that line about there being no haz-

(Continued on Page 40)



1920

1944

CONSIDER JACOBSEN

achievement

WHEN YOU BUY MOWERS AGAIN

The entire history of Jacobsen Power Lawn Mowers lies between the two World Wars, yet for Jacobsen those years were marked by constant progress and brilliant achievement in lawn mower design and improvement.

When World War II began, the majority of large lawn areas in the country were being mowed with mechanized equipment, and Jacobsen was the recognized leader in hand and power mower development.

Your postwar Jacobsen will be the result of this quarter of a century of specialized lawn mower engineering plus experience gained in war work. It will be powered by the engine that is doing such a marvelous war job—the simple, easy-starting, two-cycle engine that works so economically—every stroke a power stroke.

It is well worth waiting for—we hope it won't be long.

Jacobsen
MANUFACTURING CO.

734 WASHINGTON AVENUE RACINE, WISCONSIN

TURF and WEED CONTROL with plant growth Regulators

By JOHN W. MITCHELL 1, F. F. DAVIS 2, and P. C. MARTH 3

RECENT field experiments with one of the synthetic plant hormones of growth regulators, conducted by the USGA Green Section in collaboration with the Bureau of Plant Industry of the Dept. of Agriculture, have shown striking promise for the effectiveness of this group of chemicals in the control of clover and some of our more serious turf weeds. The application of aqueous sprays containing a spreader and 2, 4-dichlorophenoxyacetic acid, one of the growths regulating compounds, in preliminary exploratory tests on Kentucky bluegrass have given excellent control of clover without any apparent injury to the bluegrass.

Although these preliminary experiments have been limited to tests with only one of the so-called plant hormones, other related compounds may in the future prove to be even more selective and effective in their herbicidal action.

Pure 2, 4-dichlorophenoxyacetic acid is a white crystalline powder only very slightly soluble in water. In order to apply it in water solution at the necessary concentration, a carrying agent or binder must be used in the preparation of the spray mixture. For this purpose a proprietary compound sold under the trade name Carbowax No. 1500 was found to be ideally suited, since the hormones are readily soluble in it. It is an organic compound (a polyethylene glycol) which at room temperature is of the consistency of vaseline. Carbowax readily goes into solution in warm water. When used at a concentration of 0.5%, tests have shown that it has no effect on creeping bent turf cut at *putting green height*.

Preparation of the hormone solution to be used for herbicidal treatments, therefore, was quite simple. Nineteen grams (approximately 2/3 ounce) of the Carbowax No. 1500 was weighed for each gallon of solution desired. This was then melted in a small container on an electric hot plate. To it was added a carefully weighed amount of hormone. The strongest solution used contained 1,000 parts of the hormone per million of water (ppm.). This is a 0.1% hormone solution and required 3.8 grams (approximately 1/7 of

an ounce or 1 level teaspoonful) per gallon. When the hormone was dissolved in the Carbowax the mixture was slowly added with stirring to the measured volume of tap water, sufficient water being used to produce the particular desired concentration of both hormone and carrier. For purposes of shipping, the Carbowax-hormone mixture without water added, was cooled and permitted to congeal, in which condition it was readily transported or stored until the solution was to be used, at which time it was melted and added to the required amount of warm water, or cold water in which it dissolves more slowly.

The solutions were applied to the turf as a fine spray,—in some cases with an ordinary 3-gallon knapsack hand-pressure sprayer and in others, with a smaller 1-qt. capacity pressure sprayer fitted with a valve outlet, permitting the use of a tire pump to build up from 60 to 90 pounds of pressure in the spray tank. This latter sprayer produced a finer spray than the knapsack sprayer and was much more convenient for use on the test plots as well as for spot treatment.

Through the courtesy of Mr. Richard Watson, Greenkeeper of the Chevy Chase Club, 4x4 foot plots were laid out on Kentucky bluegrass fairways in stands of clover estimated at from 60 to 85% growing in a rather shady location. Striking results in clover eradication are illustrated in the accompanying photograph. In this test the 2, 4-dichlorophenoxyacetic acid was applied in a 0.1% solution with a 3-gallon knapsack sprayer, at a rate sufficient to give a uniform coverage. Application was made on August 28, 1944, at which time the stand of clover was estimated in both the control and treated plots at from 60 to 70%. On September 22, 25 days later, the spray-treated plots contained less than 1% clover, while the untreated control plots showed a slight increase to about 80%. The darkened clover stolons which remained on the treated plot were apparently dead while the blue grass had continued growth without distortion, discoloration or any other apparent indications of injury. When applied at half the concentration (0.05%) on comparable adjacent plots the hormone resulted in a reduction of the clover stand from 60 to

1—Physiologist; 2—Acting Director, U. S. Golf Assn.; Green Section; 3—Assoc. Physiologist, Bureau of Plant Industry, Soils, and Agr. Eng. Dept. of Agriculture, Beltsville, Maryland.

206 25 K 10 520

“To switch from politics a moment—
who’s your choice to win most of
the forthcoming winter
golf tournaments?”



“You’ve no taker here on the winner,
but I’ll lay you *this* wager—it will
be someone who will be playing
with MacGregor Tourney* clubs.”

Out of the 13 winners of the 18 major golf tournaments held since January first, 13 used—and regularly use—Tourney clubs. Out of the 18 runners-up, 15 used—and regularly use—Tourneys. Out of the 36 added winners and runners-up, 28 were Tourney users. How’s *that* for percentage? Tourneys—“the clubs the pros play”—the preferred clubs for better play of golfers everywhere—are pro-sold *exclusively*.

WAR BONDS—THE GREATEST INVESTMENT IN THE WORLD! BUY TO THE LIMIT!

MacGregor

THE GREATEST NAME IN GOLF.

REG. U. S. PAT. OFF.
MACGREGOR GOLF INC., DAYTON 1, OHIO

*TOURNEY—Trade Mark Reg. U.S. Pat. Off.



Lawn pennywort eradication from Kentucky bluegrass lawn: left, treated with aqueous spray of 2,4-dichlorophenoxyacetic acid at concentration of 0.1% with 0.5% Carbowax No. 1500 (application was made at the rate of 5 gallons to 1,000 square feet); right, untreated. Note the uninjured bluegrass in the treated plot. The bare areas indicate the extent of the destruction of the pennywort in the original stand. Hormone was applied on September 7 and the above photograph made 14 days later.

application of the 0.1% solution without injury to either old or young grass. Bare areas left upon removal of the clover were more conspicuous in the older grass, however, suggesting that for best results spray treatments should be accompanied by reseeding and fertilization, especially when a relatively large amount of clover is present.

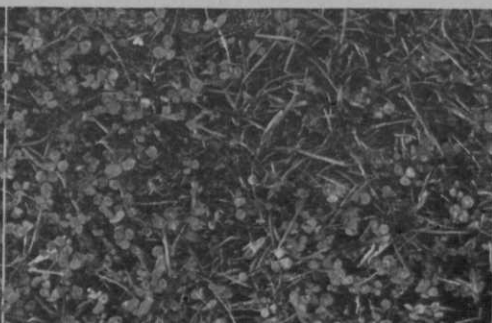
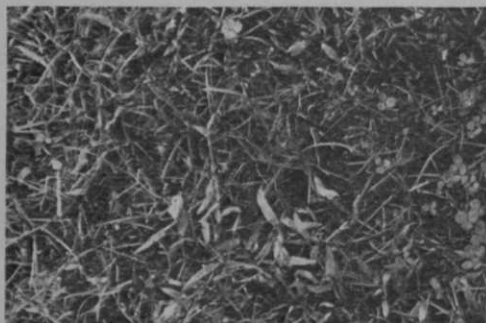
70% on August 28, to 30% by September 22.

However, some leaves developed later on stolons of plants that were not killed by these relatively mild treatments. It was evident that the clover might reestablish itself in these plots unless retreated. Light applications in the fall may prove to be relatively effective however, since the clover plants would then be exposed to unfavorable winter weather while in a weakened condition. For instance it has been shown that alfalfa and other forage legumes may suffer severe winter injury as a result of late fall cutting. It is not unlikely therefore, that stems of clover plants, which have been denuded as the result of light hormone treatment, may likewise be susceptible to winter injury. These experiments are therefore being continued in order to determine if complete control can be obtained through repeated application of a 0.05% solution of the acid.

For comparative purposes, plots were set up on old slow-growing as well as on relatively young vigorously growing bluegrass sods. An equal amount of clover was killed in both types of sod by the

Experiments on numerous turf weeds are also in progress at the present time. Lawn pennywort (*Hydrocotyle rotundifolia*), which has been remarkably resistant to arsenical herbicides as customarily applied for herbicidal purposes on turf, has been demonstrated to be even more sensitive than clover to the hormone spray. A series of plots was established on a well maintained private lawn where, in spite of fertilizing, reseeding and even the removal for several successive years of the top inch of soil, lawn pennywort had crowded out the Kentucky bluegrass each summer for the last 3 or 4 years. On September 7, 1944, when the plots were established, the turf consisted of an almost uniform stand of 60 to 80% of lawn pennywort. A single spray treatment of the 0.05% solution at the rate of 5 gallons to 1,000 square feet resulted in a complete kill of the established plants. Even on plots which received only 2½ gallons of this concentration per 1,000 square feet the

Clover eradication from bluegrass sod; left, treated with 0.1% solution of 2,4-dichlorophenoxyacetic acid; right, untreated. Note uninjured bluegrass and crabgrass as well as bare areas in the treated plot where the clover had been growing. The applications were made on August 28, 1944, and photographed on September 22.



Yes.. they'll be
**MADE RIGHT
TO PLAY RIGHT**
-finer than ever!

Louisville

POWER-BILT

Golf Clubs



Precision Built by **HILLERICH & BRADSBY** *of Louisville*

NOW MAKING WAR MATERIALS FOR UNCLE SAM

lawn pennywort was reduced to less than 1% of the original infestation. When the spray concentration was doubled (0.1%) all established plants of lawn pennywort was completely eradicated at both 2½ and 5 gallons of solution per 1,000 square feet without any injury to the established grass. These data were obtained on September 20 from the duplicate randomized 4x4 foot plots which were treated on September 7. The lawn pennywort seeds prolifically, however, and on October 2 when the plots were again examined thousands of new seedlings had developed in all of the plots. It was apparent that the seeds of lawn pennywort were not injured by any of the treatments used and that repeated applications are necessary in order to kill the plants that develop from them.

Similar tests are in progress in the Bureau of Plant Industry on such widely distributed turf weeds as dandelion, plantain, chickweed, knotweed, yarrow and others. In these experiments, which will be reported at a later date narrow-leaf plantain and dandelion were found to be very susceptible to this hormone, whereas broad-leaf plantain is relatively resistant.

Preliminary tests have also been conducted on creeping bent cut at putting green height. As is to be expected, the creeping bents at this height are much more sensitive to the treatment than is the blugrass. It is obvious that considerably more tests will have to be made to modify the rate of application before 2, 4-dichlorophenoxyacetic acid can be recommended for clover or weed control on putting greens. However, the fact that small areas of bent turf which were well drenched with the hormone solution at 0.1% concentration recovered completely after 6 weeks although the clover was permanently eradicated, would lead one to believe that it will not be impossible in subsequent experiments to determine rates which can be used that will kill the clover and at the same time not seriously injure the putting green turf. Repeated light applications may be the answer, since it has already been demonstrated in another experiment that the bent turf will tolerate an application of a 0.05% solution at the rate of 5 gallons to 1,000 square feet.

The effect of the hormones on the plants which results in their ultimate death and complete disintegration is strikingly different from that obtained with other types of herbicides. There is not at any time any evidence of burning. The action is not a local physical one but rather a systemic physiological one. The first evidence of injury is likely to appear within 24 to 48 hours after application and is evident in severe twisting and bending of stems and leaf petioles accompanied by an inhibition

of overall growth. The leaf blades of the affected plants may retain their green coloration a week to 10 days after treatment, after which time they gradually turn yellow and eventually become brown and die. In the case of the clover the darkened defoliated stems were in evidence on the surface of the ground for some time before complete disintegration ensued. During this stage distinct growth responses in the nature of abnormal swellings and gall formations were in evidence on the underground parts of the affected plants. Eventually there is a complete disintegration of the plant tissue, with practically no trace left.

It is obvious that hormones may not be effective when used in connection with the eradication of weedy grasses, particularly crabgrass. The sensitivity of plants differs widely from species to species. For instance, the narrow-leaf plantain is killed and completely disintegrated by the hormone whereas the broad-leaf plantain shows only growth curvatures of the petioles. Also in the lawn pennywort plots there was present to a limited extent a second weed, *Ajuga reptans*, which remained uninjured by the hormone.

Although the use of hormones for the selective control of clover and weeds in turf has not progressed beyond the experimental stages of development, preliminary estimates indicate that the cost of the spray material will not be prohibitive for general use. In comparison with other herbicides the actual amount of chemical required for effective dosages of the hormones is considerably less. For instance, at the strongest hormone concentration (0.1% applied at the rate of 5 gallons to 1,000 square feet), only 19 grams or approximately 2/3-ounce of 2, 4-dichlorophenoxyacetic acid was used per 1,000 square feet. This would amount to about 1¼ pounds per acre. Quotation on pure 2, 4-dichlorophenoxyacetic acid by a reliable manufacturing concern has been as low as \$2.00 per pound delivered. The cost of the Carbowax included in the spray mixture at 0.5% will amount to approximately \$2.75 per acre at current prices when 5 gallons of spray are applied per 1,000 square feet.

Very little is known concerning the effects of 2, 4-dichlorophenoxyacetic acid on the soil. It would seem advisable therefore in applying the herbicidal spray to turf to avoid soaking treatments that allow penetration of the hormone into the soil, at least until further information on the soil phase of the problem is obtained. Applications at the rate of from 3 to 5 gallons to 1,000 square feet in a fine spray are usually sufficient to wet the foliage thoroughly and uniformly without wetting the soil.

For velvety smooth greens and fairways . . .



Make regular, complete feeding with Vigoro a "must" for your course. A complete plant food, Vigoro does a real feeding job . . . one that develops extensive, deep-growing roots . . . and top growth of the right resiliency for best play.

Clean and easy to apply, Vigoro will give your grounds and fairways a real beauty treatment. Many greenkeepers are laying in a good supply of Vigoro *right now* because early orders are assured prompt shipment. Better get your order in soon.

SWIFT & COMPANY

Plant Food Division

U. S. YARDS

CHICAGO 9, ILL.

October, 1944

39

British Golf Carries On

Continued from Page 32

ards in the air. What makes these poles, and other obstacles placed for protection against enemy planes, a painful hazard is that when balls bounce from them into the gorse of the rough chances for finding the balls aren't any too good. The rough has grown exceedingly thick during the sharp-reduced wartime maintenance.

At many of the courses members handle most of the maintenance that is done. They usually work in teams responsible for several holes per team. Competition between these maintenance teams is keen. Old men and occasionally boys handle what paid maintenance work is done. Sheep pasturing on British golf courses is a general thing. Sheep don't seem to have done much damage that can't be quickly repaired. Liquor, food and labor shortages have hit clubhouse operations hard. In some places veteran stewards of the clubs get up early and help mow greens to keep the courses as attractive as possible.

Play on the Old Links at St. Andrews has been fairly heavy this past year with American pilgrims to the shrine coming in the conventional brown or blue to hack at the holy land. The American kids have taken a tremendous liking to the Scots who the Yanks say are the Texans of Britain—if they are for you the sky is the limit and if you get in wrong with them, heaven help you. Scotch and English clubs and members have utterly amazed the American kids in most instances by the cordiality of their welcome. The American lads expected the Britons to be stand-offish people who would give them a high nose and a glassy stare through a monocle when the boys came as strangers hoping for a round of golf.

The ball situation is far worse than it is in the United States. In a junky looking store window near Waterloo Bridge in London one morning I saw two dirty badly used golf balls displayed. Passing the same place that afternoon I noticed the balls were missing. I asked the man in the dingy little shop how golf ball business was with him. He said he could sell all of any sort he could get.

The London Daily Mail started a rush on sports shops in London by printing a small item reporting that reconditioned golf balls were available. What the Mail neglected to print was that an old ball had to be turned in for each one secured. In fairly rare cases it is possible to get reconditioned balls from pros without turning in an old ball.

British pros are looking forward to a boom market after the war and expect that they'll come in for a large percent of new business which may develop as a result of golf courses being made features of recreational areas now being planned for municipalities.

Some famous courses have been abandoned during the war, but the British climate and soil are so favorable to growth of golf turf that golf authorities believe these courses can be quickly restored.

Just as in the United States there is talk about excess trapping being eliminated in postwar course remodeling. Trap design also is to be changed to provide for far more machine maintenance than was customary prior to 1939. The British are expecting some decided changes in mower design and construction as a result of the more extensive use of gasoline power in view for peace years.

Notwithstanding dreary views some economists and financiers take at the postwar prospects of British wage-earners, pro and amateur golf enthusiasts believe that there'll be a lot of golf played by British common people after the war in making up for the sunshine lost during five years of long hours in factories and offices and of blackouts, to say nothing of what the men and women now in uniform will want as recreation to balance the tough years they've had.



Chicago Service Men's Center was richer by \$6,750 when George S. May (left) president of Tam Shanter CC Country Club presented Mayor Edward J. Kelly with the entry fee check from the All-American Golf Tournaments held at Tam late in August. A total of 648 men and women golfers participated in the All-American Tournaments and their entry fees totaled \$6,750, which constituted the largest single donation ever received from the golfing sport, according to Mayor Kelly.