

# THOSE WEEDS?

Answered by  
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USGA Green Section

of removing crab grass. One frequently finds crab grass being removed from turf after it has already produced some seed. This grass is an annual and does not survive the winter. The next season's crop of crab grass comes from seed produced by plants this year or during previous years.

If crab grass plants are picked out of turf early in the summer before they have a chance to produce any seed, the number of plants next year naturally will be very greatly reduced. Early picking also has the advantage of avoiding the big scars that are so commonly found in putting greens when crab grass weeding is delayed until late in summer or early fall.

**Clean soil and seed.**—Any weed control program naturally must include some preventive treatments as well as weed removal. In new plantings it is important to try to get the soil as free from weeds as circumstances will permit. It is also important to use seed relatively free from seed of obnoxious weeds. After a turf relatively free from weeds is established it is important to use no topsoil, manure or other materials that contain weed seed. A mistake that is still costing golf clubs substantial sums of money for weed removal is that of topdressing with soil containing large quantities of weed seed.

A few years ago the Green Section took random samples from a number of golf courses of the compost that had already been screened ready for topdressing putting greens. These samples were tested for weed seed content. It was found that

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in some cases in a single topdressing each green received as much as 70,000 viable weed seeds. Since that time there has been evident on golf courses a much more critical attitude toward the topdressing materials used. Reduced budgets have made it impossible for greenkeepers to give this matter as much attention as it deserves, with the result that many weed seeds have recently been planted in putting greens by this means.

Various methods have been devised for ridding soil of weed seeds. Thorough composting or carefully prepared soil beds

will greatly reduce the weed seed content. Various methods for sterilizing topsoil by means of steam or dry heat have been used on golf courses to good advantage.

**Fertilizers affect weeds.**—It has long been recognized that fertilizers materially affect the weed content of turf. It is well known that certain kinds of animal manure carry large quantities of weed seeds. In addition to their freedom from weed seeds, certain commercial fertilizers have been found to have a decidedly beneficial effect in reducing the weed problem in turf. A well fertilized turf, when other things are favorable, will crowd out many troublesome weeds and will prevent new weeds from becoming established. In general, fertilizers containing relatively large proportions of nitrogen as compared with other common fertilizing elements are most effective in checking weeds.

**Soil acidity affecting weeds.**—It has been recognized for a long time that certain plants tolerate more acid soil than will other plants. Clover and many of the other legumes will not tolerate excessive acidity. The bent grasses on the

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other hand are able to thrive in soil that is decidedly acid. It is therefore possible to have a soil so acid that clover will not grow in it but still not be too acid for bent. The acidity of the soil can be changed by the use of certain fertilizers that leave acid or alkaline residues. Many years ago experiments were conducted that demonstrated it was practical to control certain weeds in turf by changing the soil acidity, and this led to what is known in golf course parlance as the "acid theory" for weed control. Although bent grasses can tolerate soils too acid for the growth of clover this method has the serious objection that a soil sufficiently acid to control clover is too acid for the best growth of bent grass and entirely too acid for the growth of some of our other common turf grasses, particularly in sections exposed to hot dry weather. In spite of all the recent criticisms against the application



Compost carries weed seeds. Each of the above flats contain finished compost from separate compost piles. Some were practically free from weeds, whereas others contained viable weed seeds at the rate of 70,000 in a single topdressing of one green.

of the acid theory however, there are still sections of the country where it undoubtedly has some good possibilities. In a general way however it has definite limitations for most golf course turf in this country.

Sulphate of ammonia and ammonium phosphate offered the most common means for making soils more acid on golf courses. The constant use of these materials it was observed, checked the growth of clover and other legumes and favored the growth of bent. After the repeated use of these fertilizers most soils became more acid and therefore weed control was generally attributed to the resulting change in the acidity of the soil. However, there were areas of turf in which any change in acidity was checked by the constant use of sand or water containing more than enough lime to neutralize the acid remaining in the soil from these fertilizers; nevertheless practically the same control of clover was accomplished. These observations and many others led to the general recognition that much of the favorable results of sulphate of ammonia and some other acid reacting fertilizers in turf were due to the effect of the nitrogen they contained rather than to the change that they made in the acidity of the soil. Since it was recognized that weeds could be controlled in most cases by the liberal use of nitrogen without running the risk of making the soils too acid for the growth of bent at all seasons, it was no longer necessary to make any effort to deliberately change the acidity of the soil; with the result that some of the turf ailments that are naturally associated with excessive soil acidity could be minimized without affecting the weed control.

#### Destroying weeds by heat or cold.—

Various attempts have been made to control weeds by the use of apparatus that will develop extremely high or low temperatures. Tests have been made with pans into which steam could be injected in much the same manner that farmers control weed seeds in tobacco seed beds and elsewhere. Blow torches and the large heating units that are used for repairing asphalt roads have also been tested for burning weeds. Although it is possible to kill weeds with this method, it is a slow and expensive method.

Recognizing that certain weeds, particularly crab grass, are killed by frost whereas bluegrass and other permanent grasses withstand extremely low temperatures, efforts have been made to devise means for chilling turf sufficiently to kill these summer weeds. Pans containing salt and ice were first tested and later dry ice was used. One individual developed an interesting machine for distributing dry ice in turf to get it at the base of the plants to accomplish the maximum kill. These methods however have all proved to be only partially effective and too expensive for general use.

**Burning weeds with chemicals.**—It has been known for many years that certain chemicals are more injurious to some plants than to others. For instance, the grass family in a general way is more tolerant of arsenical poisonings than most of the other families of higher plants. This difference in susceptibility opens the way for treatments which will select and poison certain groups from a mixture of plants. By the use of this method it is possible to apply chemicals to turf and frequently destroy the weeds without kill-

ing the grass and without leaving any harmful residue that will prevent the normal development of the surviving grass. There are many of these weed killers already known to agricultural science and many of them have been used in turf in commercial killers or in so-called "lawn sand" in the past years. Unfortunately these materials are rather expensive and have been rather uncertain materials to use because of the danger of excessive burning.

One of the most common of these selective weed killers used on turf is iron sulphate. This chemical came into rather general use on turf over 20 years ago. It has, however, failed to come up to original expectations in many respects, particularly on many types of soil. There were, however, many instances where iron sulphate and other weed killers had given com-

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pletely satisfactory results at a moderate cost. Since it was possible to obtain favorable results even occasionally with these chemicals it was quite apparent that they had some practical possibilities for turf purposes. It was clearly apparent, however, from the many failures to obtain satisfactory results, that much more information was needed before they could be considered dependable for general usage.

With that in mind the Green Section five years ago undertook to systematically compare the effectiveness of the various chemicals that offered any possibilities for the control of the most troublesome turf weeds. These tests have included various arsenicals, sodium and potassium chlorate, sodium chloride, calcium chloride, iron sulphate, ammonium thiocyanate, calcium cyanamid and many others. Of these the most promising results were obtained from sodium chlorate, arsenic acid and sodium arsenite. The recent tests have concentrated on the use of these three materials.

These materials, like others, under certain circumstances can kill weeds effectively without injuring grass. However, in any work of this nature the problem is complicated by the fact that variations in soil, climate and the condition of the plants determine to a large degree the amount of injury that is accomplished by any one treatment. Take for example the

case of arsenic acid. This can be applied under certain favorable conditions at the rate of one pound to the thousand square feet without any appreciable injury to bluegrass but with a complete killing of weeds. Under entirely different climatic conditions, particularly during extremely hot dry weather, a half-pound rate of the same material may destroy practically all of the bluegrass. The problem therefore is not the simple one of determining what chemicals will serve this purpose well and the rates of application, but also the various soil and climatic factors that govern the effectiveness of any of these treatments.

Progress in these problems has been necessarily slow because of inadequate funds for carrying on the large number of tests that must be conducted under a wide assortment of conditions. These remedies as far as golf course turf is concerned are still in their infancy, but from the many favorable results that have been obtained from them to date it is reasonably safe to predict that within a few years much of this material will be used on golf course turf. Space will not permit a discussion of these treatments in the present article but the progress to date will be discussed in a later issue of GOLFDOM.

#### Movies of Spalding Field Staff in Action Available Soon

**A** VAILABLE before long will be an exceedingly interesting series of golf motion pictures of members of the Spalding advisory field staff. Pictures were begun right after the Augusta national tournament this spring under the direction of Bob Jones and were completed late in the summer.

Details of the showing of the pictures by pros at their clubs and to the general golfing public will be released soon by A. G. Spalding & Bros.

**Younger Caddies Reappear**—A good sign of general business improvement and of a healthier situation for golf's future is observed by Jimmy Meehan, veteran pro at Riverside CC (Chicago district). Jimmy says at courses in western area of Chicago there are 50% more small kids caddying than were in service last year. His conclusion is that older fellows have gone back to industrial jobs and youngsters, who are probable golf enthusiasts of the future, again find openings in caddie jobs.

## She's Made a Success of Her Chicago Indoor School

By RAY REYNOLDS

**T**HROUGH good housekeeping and a business-school atmosphere, Helen Macdonald has made a success in one of the most hazardous of professional golf phases of commerce, the indoor school.

On the southern fringe of Chicago's loop district—a location that is by no means ideal for a golf school—Helen has been conducting a school with steady profits, winter and summer, for almost three years. She went into the enterprise with a good working knowledge of instruction fundamentals acquired from Bob Macdonald, very little dough and no widely acknowledged reputation as a teacher, but with a deep conviction that an indoor golf school could be made a commercial success. She's made money and acquired a steadily increasing clientele for herself and for her co-instructors, of whom she has two in the winter, Gene Aldrich and Bill Hartshorn. Aldrich continues on the job at the school the year around.

When you go into the place you notice, first of all, that it is neat. There are nine windows to the place, and each is well washed. The three nets are always in good condition. Mats are first class and replaced when they show signs of wear. Floors are kept clean and the patrons have ash trays handy so cigarettes, cigars and ashes are in the trays instead of on the floor. Balls are kept white and are in porcelain containers instead of the usual untidy boxes. There are plants around the place and the notices, instead of being tacked up at random, are on an attractive bulletin board. Clubs are kept shellacked and in good repair.

### Gassers

#### Get the Gate

One handicap that has embarrassed pros with indoor schools didn't bother Helen Macdonald very long. There is often a class of golf loafers who hang around a golf school and give the place more the appearance of a haven for orphans of the economic storm than of a high class place for recreation and instruction. Such "bums," who drift into the Macdonald school to sit around and gas, are promptly given the familiar rush. The absence of distraction by loafers helps to get instruction results, Helen and her associates testify. Pupils are in the right atmosphere for instruction. There are curtains around the nets so each lesson is given in privacy.

There is no loudness or horse-play.

Instead of having clothes spread around the place, dressing room and hangers are provided for men and women. There also is shoe and club storage space provided.

Patronage at the Helen Macdonald school is about 50-50 men and women. Helen says that it was difficult at first to establish confidence of the men pupils, but now is able to present testimony from many of her men pupils to the effect that her instruction has been resultful. With women and children pupils she made good right from the start. The fellows who teach at the Macdonald school say there's a great deal of difference between teaching in a neat, airy school and in the general type of haphazard installation of nets, whether pupils are men, women or children.

For ventilation, Helen's school is especially well designed. In summer electric fans promote air from the windows and the place is so comfortable that she averages 10 lessons a day in the hottest weather. During the winter, the three instructors are busy from the hour the school opens until it closes at 10 P.M. Patronage from loop hotels accounts for much of the evening business.

The furniture, the rugs, the putting carpet, the autographed pictures and the neatly stacked magazines and books all give the place an attractive, business-like air. Helen even has the splash area back of the washbasin painted green so it would continue to look neat. Her business stationery, business cards and other advertising material are in excellent taste and representative of a place where golf instruction and practice facilities are designed to please discriminating people.

She carries small stocks of golf equipment, but has a complete set of catalogs for reference by those interested in purchasing. This part of the layout, too, is kept immaculate and in orderly array.

Helen confesses she had plenty of misgivings when she started on her bold adventure with this school, and certainly her pro friends who sincerely wished her luck thought she was taking a long chance. But the way the enterprise has made good is conclusive evidence that she had the right idea—an idea that is worthy of serious thought by any pro who conducts an indoor school during any part of the year. Her idea simply was that a golf schoolroom should be as bright, as attractive and as orderly as any other kind of a first class schoolroom.



# PROS SEE BIG YEARS AHEAD

By HERB GRAFFIS

*... and they think 1936  
has treated them pretty well*

**T**HIS year showed one of the biggest single year's increase in sales volume that many pros recall. Though greatly cheered by the improvement, pros are not inclined to coast and by a much larger amount of fall ordering than has been done for many years past, have revealed expectations of a continued improvement in 1937.

Studied foresight and planning brought returns to pros in 1936. The old idea that club selling is practically at end after the middle of June was not in evidence at many of the shops and it can be said that considerable of the pro net increase in club sales this year came from the volume sold in July, August and later. The pro performance in this respect has been enlightening to thoughtful manufacturers and, it is hoped, may have some effect in restricting the questionable practice of starting the golf selling season with strongly advertised cut-price sales.

There is a definite change in attitude of pros toward competition. Previously it was generally the case that the pros held all store sales in suspicion. Now, according to reports from competent pro observers in all parts of the country, it is not the legitimate stores that furnish whatever competition is to be feared, but the employees' co-op stores, the untruthful

advertisers, and the trick discount outlets. In every section except the New York metropolitan district, pros report that the old major warfare with cut-price stores has ended, with the pros as victors. There wasn't enough money in golf for the stores to continue fighting a losing battle. The pro command of the better grade club business, even in the New York sector, is admitted. Circus-style advertising, of doubtful honesty, has the New York situation disturbing to pros, especially on ball sales.

There always is difficulty in appraising the pro merchandising situation accurately because, as pros themselves know, sales will show wide differences between two clubs that may apparently have the same class of membership and the same character of pro merchandising service at work. However, the following reports from pros who have been asked to give the general close-up on conditions in their districts give as precise a picture as it is possible to get.

## From Grange Alves, Cleveland:

"There has been a decided improvement over any of the last four years throughout our section. My own year was the best since 1931.

"I believe we will always have downtown competition to combat and see no remedy. Manufacturers have to live the same as pros and if the pros can't sell the tail-end numbers or discontinued lines with which they are over-stocked, the makers can't eat them and are bound to dispose of them wherever they can. I don't blame them for finding a market.

"There will be many who will disagree with me but they don't place themselves in the other fellow's position. A willingness to look at things clearly and fairly from the other man's side of the fence would settle practically every controversy

in pro merchandising, and make the adjustment profitably.

"If industry continues its strong comeback, I look for pro business in 1937 that will be up to the old-time standard, but we have to have general business in good condition before we can get ours."

## From Fred Brand, Pittsburgh:

"Considering bad weather in the spring and a late start there has been far more golf played this year during open weather than in any other year since 1930 around here. Sales have shown an increase at the pro-shops.

"Store competition is decidedly less and the inroad of employees' co-op buying has not been as noticeable this season as formerly.

"What seems to explain the pro business

# Thanks a Million!

With the help and support of the rank and file of Professional Golfers, this Company on November 1st will close the most successful business year in its history.

We will have a nice entry in our books in black ink, to represent the fiscal year's transactions.

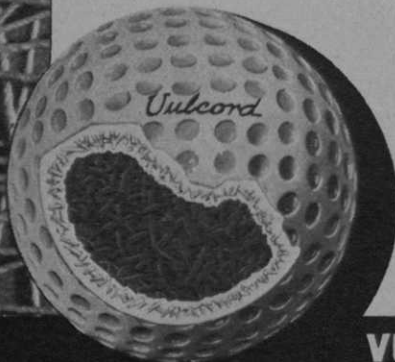
In the sporting goods industry, profits are still so rare as to be the exception, so we take a justifiable pride in our accomplishment.

This Company is now firmly entrenched as one of the leaders in the golf business.

It has sponsored many of the most outstanding developments in both club and ball construction.

To the creators of Walter Hagen Golf Equipment, therefore, you can look in 1937, as you have in the past, for the liveliest and most important news in the industry.

On the page opposite we touch on only one of the surprises Hagen has in store for you in 1937.



**VULCANIZED CORD COVER**



WALTER HAGEN  
**VULCORD**  
 GOLF BALLS

## With Vulcanized Cord Cover

Here is a natural! A golf ball with Vulcanized Cord Cover!

Recall the record of the Cord Tire in prolonging the life and usefulness of motor car tires and you will have a direct parallel as to what the Vulcanized Cord Cover on the Hagen Vulcord will accomplish in adding to the life of a golf ball.

The Vulcanized Cover was a distinct industry success in 1936.

The Vulcanized Cord Cover carries this idea of cover toughness to its furthest conclusion.

If golfers want 'em tough—and 1936 conclusively proves they do—we will give them balls with covers as tough as a Rhino's hide.

And in the Hagen Vulcord, they get toughness without the sacrifice of one iota of distance.

Whether on the driving machine—off the club of a professional golfer—or when driven by your average player—the Vulcord is as long as any ball on the market.

1937 is tagged as Hagen Vulcord year. Ask your Hagen salesman about the "Hagen Sweeptakes"—a novel and ingenious method of creating ball business for you in your own club.

**L.A. YOUNG GOLF CO. . . DETROIT**

recovery is the pro himself. Pros have made great strides in gaining members' confidence and have convinced members they can get better deals from the pros than from the stores.

"Continuance of the present business revival means a very bright 1937 for pro business."

#### From Ed. Newkirk, Lincoln, Neb.:

"From May 8 to September 26 we went without rain and when it did come, it came on a Saturday. We had temperature of 100 degrees or more starting June 25 and continuing for 68 days. A few blows, moderately described as "dust" storms, were added to our weather.

"Weather is what the pros in this territory consider competition and it's tougher to buck than any other obstacle to pro sales. Stock food crops were sharply reduced by the drought, which does not justify any great optimism for next year's pro business. However those members and pros in this section who were not 'ploughed under' this year are a doughty collection and continue to expect an improvement, if only because misfortune is bound to get tired of batting them down."

#### From Willie Hunter, Southern California:

"Play has increased tremendously this year and sales in even greater proportion.

"Down-town store competition is not serious. It's the chain drug stores and the numerous non-club semi-pros who do the chiselling out here. Pros have come through the storm better than the sporting goods stores and the sports departments of established stores. These legitimate retailers seem to be pretty much at the mercy of the price cutters who use golf as an intermittent side-line and may be practically on the way out, which probably will leave the manufacturers with a miserable retailing situation. The Southern California PGA, with foresight, is working to protect its own members and their golfers against merchandising developments that will curtail the progress and pleasure of the game.

"Our greatest need at present is greater co-operation from manufacturers and their agents. Selling to questionable accounts is inexcusable, especially after attention has been called to such cases. In our section we probably have 30 so-called pros who solicit business at cut prices. These men do a good volume, which probably is the reason they are sold at wholesale. If so-called pros without a stocked place of

business were not sold merchandise for resale, a larger part of the chiselling on pro-grade merchandise would be eliminated.

"If manufacturers would take action to keep merchandise out of the hands of these men, this retail volume would be placed in the legitimate channels and there would be less reason for sporting goods stores to cut prices to compete.

"Employees' co-op buying is at its worst at the movie studios where they buy practically everything at 15% to 20% off on orders from studio purchasing agents. The raw part of this is that these people are well able to pay full retail price. The pros pay the full price to see movies.

"The Southern California section keeps working on our troubles and at least has the satisfaction of preventing the increase of adverse conditions. We work in close cooperation with the Amateur body on all matters which touch either body and are receiving more encouragement than ever before.

"Our Bulletin is a great success and has brought to the attention of club presidents, newspapers and manufacturers' agents many matters that previously have been out of sight.

"We believe earnestly in having our own house in order before we attempt to correct others. Our own members are promptly put on the carpet for infringement of rules or conduct that reflect on the association.

"The PGA has gained much strength during the depression and as a body should take close cognizance of manufacturers' selling policies. More constructive work along merchandising lines should be done and such work should be given added thought and plenty of discussion at annual meetings, instead of the routine bushwa.

"It has been said that we in Southern California are more fortunately placed than in other communities. If this is so, it is only because we keep hammering for improvements and give more than the average PGA officer's time to fighting any attempt to increase unfair competition. Other sections are reconciled to certain conditions being established and take the line of least resistance.

"Sales promotion and the elimination of unfair practices should be nationally directed and sectionally carried out.

"Despite all these things, we as a bunch can do pretty good individual jobs of taking care of our playing public by getting into their good graces. Golfers appreciate,



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2. **The New Wilson Vulcanized Golf Ball**—which, because of the Wilson exclusive "mild heat" "air-cure" process, unites extraordinary performance and durability never before combined in one golf ball.
3. **The Wilson Turf Rider Woods**—the clubs with the uniquely designed sole that literally rides the turf and snuggles down to the ball in a way that adds surety to the shot.

Only through close cooperation of the Wilson Player Advisory Board, its designing staff, manufacturing corps, and the practical test of "pros" who play and teach the game, were these master shots of golf achieved.

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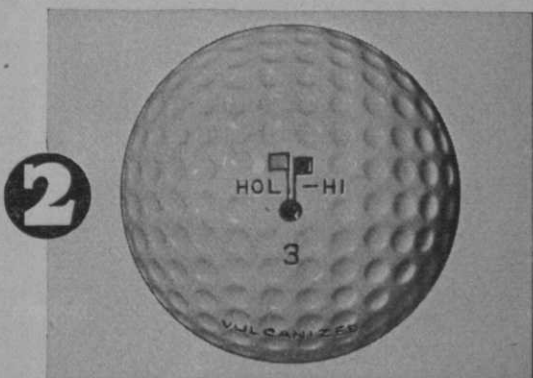
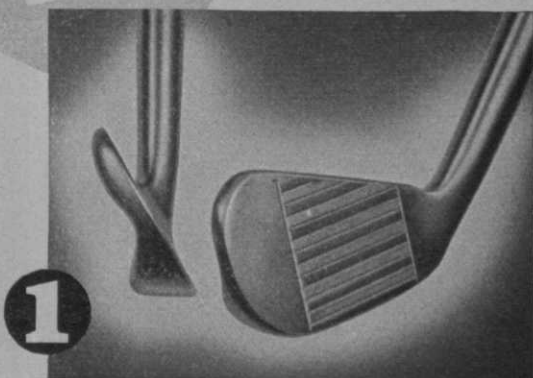
*"It pays to play"*

## Wilson

**GOLF EQUIPMENT**

By this mark  you shall know  
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**WILSON SPORTING GOODS CO.**  
Chicago, New York and Other Leading Cities



# Thank Bobby Jones



**Each Spalding gift box contains a copy of Bobby Jones' new handbook, "Rights and Wrongs of Golf."**

**H**ERE'S a grand gift for any golfer, and a grand opportunity for you to solve the Christmas gift problems of your members—at a profit.

For not only can you offer them a dozen Spalding golf balls packed in an attractive, durable trinket box—

either the famous Kro-Flite, Tournament, Top-Flite, P.G.A. Championship, Red, or Black—but there's a big *plus* with every box: a copy of Bobby Jones' new handbook, "Rights and Wrongs of Golf"...60 pages of practical advice for every golfer who