

Table III—Compost Treatment, of Application of Materials and Results of Tests as Shown by Percentage of Control of Weed Seeds, Temperatures Obtained, and the Effect of Treated Compost on Putting Green Turf. Bin Test, 1942.

Materials	Nitrogen		Max. Temp. June 17 ^e	Per cent Control of			Color Increase on	
	per cu. yd. pounds	Mat'l per cu. yd. lbs.		Weeds	Grasses	Clovers	Bent Grass ^d	Creeping Colonial
Milorganite	5	83	104	95	97	100	100	100
Agrinite	5	62	97	95	97	100	83	100
Calcium Cyanamid	1	5	76	98	99	96	50	57
“ “	2	10	72	100	99	99	66	71
Ammonium Sulfate	5	25 ^a	72	100	100	100	100	86
Chloropicrin	0	1	71	99	99	0	33	29
Check	0	0	71	0	0	0	33	29 ^b
							0	0 ^c

a. An equal number of pounds of ground limestone were added to help neutralize the acidity from the ammonium sulfate. b. Untreated compost. c. No compost. d. From application of treated compost applied to putting green turf as topdressing one month after treatment. e. Experiment started June 11, 1942.

generated a temperature of 97°, an increase of 26°, and slight increases in temperatures were recorded for the other fertilizer treatments but not for Chloropicrin. On July 14, samples of the treated compost were placed in flats and taken to the greenhouse. The per cent control of weed, grass, and clover seed of the variously treated lots are shown in Table III. All treatments gave at least 95% kill of weed seeds. The mixture of sulfate of ammonia and limestone gave perfect control of weed, grass and clover seed. Milorganite and Agrinite killed the clover seed. Cyanamid killed most of the clover but Chloropicrin did not seem to kill clover seed.

In order to determine if there would be any detrimental effect from the use of the variously treated composts on putting green turf, they were applied as topdressing at the rate of one-fifth cu. yd. per 1000 sq. ft. on July 14, a month after treatment, to plats of creeping bent, and Colonial bent. Within 3 days after the compost was applied, there was marked increase in growth and color. The compost treated with sulfate of ammonia gave the quickest response. Two weeks after the topdressing was applied, notes were taken on the increase in color. The percentage of increase is shown in Table III. It can be noted that all treated composts except with Chloropicrin gave considerable response when applied as topdressing. No available nitrogen in Chloropicrin could account for this. No harmful effects were observed from any of the applications.

Temperatures at 160° to 170° F. were obtained in compost piles consisting of 10 to 15 cu. yds. when mixed with Milorganite at the rate of 15 lbs. of N. per cu. yd. of

compost during August and September of 1942. In the compost mixture where the nitrogenous fertilizer may create a high temperature there is a possibility of loss of ammonia, although no such loss was noted in any of these tests. Certain of the organic fertilizers generated such high temperatures in such a short time that it appears that these sources of nitrogen may be dangerous if applied alone in very large humid, rainy periods of July and August, quantities on turf especially during hot, or just prior thereto, and might possibly cause injury called “scald” of grass.

It appears that when nitrogenous fertilizers have the ability to create an extremely high temperature, with the help of bacteria, fungi, and moisture, that the temperature should not be allowed to exceed a point where any form of nitrogen might be lost or given off in the atmosphere.

Conclusions

The results of these experiments show that the method of killing undesirable weed seeds in compost by mixing the compost with certain fertilizers that contain nitrogen is of considerable value. It is practical as well as economical and will provide compost relatively free of viable weed seeds. Little or no increase in temperature occurred from the use of inorganic nitrogenous fertilizers such as Cyanamid, and ammonium sulfate and limestone. It appears that weed seed can be killed in compost with some of the fertilizers without generation of heat. It is also apparent that it is not the heat alone that does the damage to weed seeds.

Whether or not the compost-organic fertilizer mixture is covered with a canvas or

A statement on the golf ball situation



● The law of supply and demand is beginning to pinch the golf industry. Up to now, golfers have had little trouble in purchasing golf balls. This seeming abundance may not hold true for the rest of the season.

Just because golfers have mistaken past availabilities in pro shops and golf departments as a sign of plenty, we who depend on the game for livelihood needn't fool ourselves in the same way.

There is no abundance. Everyone interested in golf as a business knows there have been no new golf balls made for over a year. To assure a continued supply of reprocessed balls you *must* get the old ones in *NOW*.

We at Spalding are trying desperately to keep you supplied. We originated the Spalding Golf Ball Salvage Plan as the best means in our power to

save the situation. But old golf balls won't roll in of their own accord. You men out there in daily contact with the golfers must see to it that ball collection becomes your *Number One* job from now on. Some are doing magnificent service in this respect. But now everyone must pitch in if golf is to continue.

Call in local newspapers and ask them to give space in their sports columns to this problem. Use posters that we and other manufacturers send you. Make personal appeals. Put on drives. Do all you can. But do it now.

How about it?

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BOMBER



RECRUIT

other material will make a difference in the amount of heat accumulated. The moisture content is undoubtedly a factor that should be considered and controlled when treatment with organic nitrogenous fertilizers is undertaken for the purpose of soil sterilization.

The method is both practical and economical from the greenkeepers standpoint because both sterilized compost and fertilizer may be applied as topdressing at the same time in one operation. This would save considerable of the time involved in making two separate applications of compost and fertilizer, especially during peri-

ods of labor shortage. This method would also have a tendency toward a more uniform distribution of fertilizer and, according to these tests, there was considerable benefit and no harmful effects on established turf when topdressed with compost treated with the various fertilizer materials used at the rates employed.

In view of the scarcity of inorganic nitrogen due to its demand for use in munitions during war times, it is imperative to substitute organic nitrogenous fertilizers. It is fortunate that they can be employed for the dual purpose of soil sterilization and fertilization.

DO IT NOW; THINGS MAY GET WORSE!

By HAL HERMAN

FORESIGHTED policy for a green committee is to work on the basis that things will get a lot worse before they get better, and to leave nothing undone to get all possible work done this summer and fall. It has been repeatedly proved that over-emphasis of the cost element of golf course work in wartime is seriously false economy. Putting off a job until financial conditions get better has meant that the job generally is delayed until it is impossible to get labor or materials for it. Clubs now find themselves with money to pay for work that can't be done. That development is an unusual thing in the past 25 to 30 years of American golf club history.

The one controlling element in determining what golf club work should be done now is whether or not it will retard war production work. If, in the judgment of the green committee, the golf club job will take labor or materials not under priority control, there is no license for the clubs to grab at the chance to get the work done, regardless of what other civilian enterprises may do under the same circumstances.

Club experiences with high school students' vacation labor has been spotty. Some of the youngsters are fine workers and learn quickly. Others have no desire to shine at earning their money. They stall and are apparently unable to do simple jobs satisfactorily. However, as war industry usually doesn't want to employ youngsters during the brief period of summer vacations and the farmers' ex-

perience with city and suburban high school student labor hasn't been notably satisfactory, there are many of these boys available for simple tasks at clubs.

Another source of labor for such jobs as golf clubs may be able to do in preparing against the eventuality of more serious labor and material shortages next year, is suggested by the USGA in its Green Section Turf Topics.

This suggestion is that partially disabled war veterans may be able to resume useful civilian lives by working for golf clubs. The clubs are advised to acquaint Veterans' Employment representatives in their areas with their labor requirements. Considerable of the golf club work would be outdoor and of a sort that could help rebuild the health and spirit of some young fellow battered by war.

However, in this connection, some believe that lawyer members of clubs ought to look into the matter of the veteran's legal status in connection with re-employment at the job he had before the war. These cautious people suspect there may be a chance of a veteran employed by a club for seasonal work sacrificing his rights under laws governing re-employment of veterans. Although we are of the opinion the Veterans' Employment representatives would bear that point prominently in mind, it's not a bad thing for the clubs to consider. No club in its desire to offer employment to a veteran—and in its desire to get its own work done—would want to take a chance

The Army Signal Corps rounded up these three prominent golfers for a photo at the Camp Croft (S.C.) driving range. (L. to r.) Pfc. John Malesky, former assistant pro at Shelter Rock CC (Roslyn, L.I.); Lt. Col. R. Otto Probst (South Bend, Ind.), Camp Croft inspector, whose collection of golfing literature is said to be the largest in the world; and Pvt. Clayton Haefner, well-known tournament pro.

Camp Croft's driving range gets landslide play every day and a golf ball shortage is developing. Generous minded golfers are invited to "keep 'em golfing" by donating a few used balls to the range. They may be sent in care of Lt. Col. Probst.



with nullifying legal rights of some fellow sent back from battle as a casualty.

What might be the psychological situation in employing battered war veterans at a recreation establishment, and for the moderate wages such a recreation establishment as a golf club could afford to pay? Your guess is as good as anyone's.

Pooling of labor among neighboring clubs, another suggestion of the Green Section, appeals to green chairmen as having good possibilities.

A green-chairman of long experience, commenting on the USGA idea of pooling labor, remarked: "It should be a great idea for clubs that are close together. Application of the idea, though, ought to start by green committees of the clubs getting together and pooling their ideas on course work that should be planned to ease the problems of wartime maintenance. Much of this work still is on a hit-and-miss basis. The big value of the labor pool would be lost if the available men in the pool were sent around to courses to do emergency jobs instead of working on a planned program to prepare for the time when golf course maintenance is going to be even a tougher problem than it is today.

"Frequent turnover in green committee personnel," this veteran chairman added, "has kept golf clubs from forming the habit of looking ahead in course maintenance. Now, when we should be looking ahead to the possibility of having fewer men for maintenance work next year and less equipment and supplies for the work, many clubs think that all

they can do—or should do—is operate on a day-to-day basis."

Although operating on a long-range, wartime maintenance program has limitations that will tax the genius and foresight of superintendents and green committees, it's still the major responsibility of those who are in charge of golf courses. They can think now of the work they wished that they had done last year and lament, but next year when they think of what still could have been done this year, their regrets will be even keener.

Trouble in Part-Time Job—A pro at an eastern club declares that the idea of taking a defense plant job and working for the Club Saturday afternoon, Sunday and other time not conflicting with the factory schedule didn't result happily for him. After 12 years with the club he was discharged on a week's notice. The pro claims a club official stated that the defense plant job prevented the club getting adequate pro service.

Golf may contribute to the physical fitness program in a number of ways. The soldier or officer working long hours under great tension may do much toward regaining his balance and restoring his energy with a short round of golf. The game is of value in that it affords relaxation for body and mind and is a factor in developing coordination self-control, balance, timing and accuracy of movement.—Guide for Physical Training and Athletics; Army Air Force Technical Training Command.



THERE



Here are two corner views of busy factory floors
at the MacGregor plant which, for obvious
reasons, do not disclose details of producti

will be no lost battalions in this war . . .

Here is further evidence of the care that the U. S. Government is taking of our boys in the service. Among the innumerable essential items of equipment that have been thoughtfully and scientifically conceived and developed by the Army Air Forces is an aerial delivery container. These containers—specially designed, specially constructed, padded, and reinforced—are fastened to parachutes and air-borne for dropping guns, ammunition, food, water, medical supplies and many other items vital to forces that may be situated in some inaccessible position, cut off from regular lines of supply, or temporarily surrounded by the enemy.

Lowering supplies by parachute in these containers saves the lives of many men who otherwise would be lost. Through Army Air Forces foresightedness, there will be no lost battalions in this war.

Day and night, MacGregor's spacious four-story factory is busily engaged in war production. These containers* are one of the items being manufactured in quantity by MacGregor. To the MacGregor organization—and to isolated Allied troops in various outposts of the world—this particular job is *the most important job in the world*. It is far more important than making golf bags and golf clubs. So, until the day of final Victory, when MacGregor machines and the skill of MacGregor craftsmen can resume the manufacture of fine golf equipment, MacGregor will continue to apply its full resources to the essential task at hand.

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FIGHTING CAN'T STOP FOR A MINUTE. BUY BONDS REGULARLY.

*Canvas and felt aerial containers for the Army Air Forces are just one of a number of MacGregor's wartime products.

Let's Take Inventory

By W. J.
FORSTER

MANY club executives have probably taken inventory of their situations and reviewed their operating factors very carefully. To those who have not, let me urge that it be done immediately. This study should not be general or casual. The greater the care and detail with which it is prepared, the greater the benefits it will yield. Write it down.

It is surprising how many thoughts will be retained if we place the apparently obvious in writing. Take time to find out exactly what procedure is followed in each nook and corner of your operations, and the result will be that every small operating practice will receive attention. Not only that, but when operating requirements change, you will have before you a clear picture of your present practices and can thus start without delay to make changes meeting the problem presented.

Kill Idle Attractions

When an inventory has been prepared, it is of course necessary that it be used. Each item, each procedure, should be carefully considered and economies in expense and improvements in service and priorities will probably force either a modification or, in some cases, an abandonment of many club policies which have for years been sacred traditions, even though long outmoded in the commercial operator's eye. The rugged individualism of the past must be discarded for the ultimate in simplicity and efficiency. In short, there should be nothing so traditional in the club that it cannot be changed, if that change makes for operating economy or a healthy increase in revenue. Have you some departments of your club, patronized by but a few members, but costly to operate? Is it fair that these few members be favored at the expense of the other members?

It is expedient that every effort be made to educate members as to their need of the physical and mental relaxation their club affords them. They should be educated to the point where they will consider it a questionable economy to dispense with their membership.

Many men are spending much more time at their places of business, and

are thus prevented from using the club to the same extent as heretofore. Cognizance should be taken of this fact and careful consideration should be given to the possibility of rearranging membership schedules so that the dues and charges paid by these members can be made commensurate with the use they are obtaining from the club. A step in this direction was taken by some clubs years ago. These clubs rearranged their dues schedule on the basis of a comparatively low general membership dues for each club facility that the member wished to use.

Present day salaries have brought many people into a higher category where they feel they can afford some sort of modified club membership. On the other hand, a higher cost of living and increased income taxes have brought other people into a position where all they can afford is a modified membership. Also, it should be remembered that gas and tire rationing, as well as other transportation difficulties, tend to dam up increased spending power in certain areas. The country club that can tap this spending power has gone a long way toward solving its income lost through members entering the armed forces. While I know that it would be disastrous to open your doors to men and women who would not congenially fit into your present membership, I can name more than one club that continues to be in financial difficulties because, through the years, it discouraged acceptance of new members. All too often, clubs have also in this respect lived in the past, oblivious to the present and future.

Don't Bow to Tradition

The most important thing is that club managers and other officials quickly recognize each problem and promptly take definite steps toward its solution. Whether the problem be one of internal operations or of membership policies, it must be considered in the light of present conditions and solved quickly without regard to former practices. No one can lay down a cure-all or a set of rules which will guarantee success, and each individual club must deal with its own problems.

If conditions reach a point where you

*For want of a ball
The player was lost*

*For want of a player
The foursome was lost*

*For want of a foursome
The club was lost*

*For want of a club
The game was lost*

Pros...

the time has come to counter attack!

THE pincer movement on golf has reached a critical stage due to lack of ammunition.

As the nation's most able and experienced strategists it is up to you to get your 2,000,000 players to turn in their used golf balls, without delay, for reprocessing and return to the firing line.

Hundreds of pros have proved their leadership by outstanding performance in collecting used golf balls. It can be done! How about you—are you doing your share to protect golf during the most critical period in its history?

Hit hard—and keep hitting!

THE WORTHINGTON BALL CO.

ELYRIA, OHIO

WORLD'S LARGEST EXCLUSIVE GOLF BALL MAKER

cannot operate, recognize it quickly and close up shop, possibly for part of the year. But remember this requires careful study, also, to determine if it would be more economical to do so.

Some clubs have abandoned their own quarters and gone to live with another club. Retaining their own individuality, they have combined their incomes and expenses, and apparently live happily together.

Something further should be said about selling prices in our club restaurants and bars. Have you increased these selling prices, and reduced the number of selections on your menus, and even prepared smaller portions? Other clubs have done this after suitable propaganda to acquaint their members with the fact that they must take less and pay more for it.

Special privileges to those members who demand them is one of the evils so apparent today when costs are rising so rapidly.

There are continuously being published in your club magazines, and in hotel and restaurant publications, many valuable suggestions for expense reductions. The list is being added to every month. It is comforting to hear about and read these suggestions, but they are utterly useless unless put into effect.

Ernie Way, Pro Vet, Dies After Prolonged Illness

ERNIE WAY, veteran of American golf, died at Miami, Fla. June 12. Ernie had suffered a stroke in October, 1942 while supt of the Detroit GC and had gone to Florida hoping to regain his health.

He was born at Westward Ho, England, and came to the U. S. in 1898 to take a pro job at Pittsburgh. In 1906 he went with the Detroit GC as pro. He stayed there until 1919, building the club's two courses among his other work. He later became pro at Pine Lake, then returned to Detroit GC as supt. He designed and built a number of excellent private and public courses.

Two of his brothers, Jack and Bert, both of the Cleveland district, also are highly esteemed pro veterans. Another brother, Charles, and a sister, Ada, are in England. He also is survived by his widow, a daughter, Mrs. William B. Crawford, of Detroit, and a son, Walker, of Cincinnati.

Ernie was a charter member of the

HOW MUCH NON-HIGHWAY GAS DID YOU USE?

The USGA Green Section would like to obtain figures on the amount of gasoline used last year for turf maintenance on golf courses, particularly in the Eastern states. The Green Section seeks this information from clubs that have their records kept to show the amount of off-highway gasoline used per season, so in submitting your figures please see that course maintenance gasoline is distinguished from highway uses of gasoline such as club buses, etc.

Please send data to USGA Green Section, Room 307, Building 4, Bureau of Plant Industry station, Beltsville, Md.

national and Michigan PGA and prominent in national and sectional greenkeeper organizations. He was a grand old-timer who contributed greatly in ability, kindly temperament and high sportsmanship, to the growth of the game in this country.

Relax; Only Onions Absorb Lead Arsenate

Possible effects on garden vegetables of arsenate of lead in soil is a live topic as many clubs cooperating with the food production program had previously treated turf with arsenate of lead to control Japanese beetle grubs. Some question whether vegetables grown in such soils would absorb enough arsenic to make them undesirable or dangerous to eat. "Timely Turf Topics" of the USGA Green Section reports as follows:

"In answer to this question the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture cite the results of experiments on the subject conducted at the Bureau's research laboratory in Moorestown, N. J.

"In these tests the quantity of arsenate of lead added to the soil was from two to eight times the amount customarily used for grubproofing turf (10 pounds to 1,000 square feet). In spite of this abnormal treatment only a negligible amount of arsenic was absorbed by most vegetables even the first year after treatment, except for onions, which were found to contain appreciably more than .025 grain of arsenic per pound, which is the arsenic tolerance announced by the Federal Security Agency for insecticidal residues on certain fruits entering interstate commerce.

"The arsenate of lead at these abnormally high rates, however, did affect the growth of some of the plants, notably