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Jack Fox (2nd from right) was recently honored at a luncheon by a group of veteran New Jersey pros upon his retirement from the game after 50 years of notable service. Jack was at Glen Ridge CC when he decided that he had given his last lesson and made his last pro shop sale. Shortly after this, he and Mrs. Fox departed for a three month vacation in the British Isle where, among other things, he'll visit his birthplace in Scotland. With Jack in the photo are from l to r: Jim Barnes, Jack Jolly, All Randall, Jim Taylor, Jack Semple and Tommy Harmon. Bud Geoghegan, pro at Crestmont CC took this picture.

nite, has turned golf promoter by day. His committee has waged a tireless campaign to raise funds and get labor to finish the job. Cash raised has exceeded $12,000.00 and the man-hour value demanded in cutting, hauling and salvaging timber has run to many times that figure.

"This course will do a lot for Grand Marais", says Leng. "Summer tourists come into town in droves. We have a nice place for them with plenty to offer — camping, boating, swimming, fishing, picnicking — just about everything. The only big item we don't have is golf, but we're going to have that, too."

Getting the course finished probably will call for another $21,000.00. This will involve completely clearing the fairways and seeding, building greens and installing a watering system.

"We're taking a long time to build this course," says Leng, "we want it done right. We've spent more than $12,000.00 and used a lot of labor, but we don't owe any money. Gifts from merchants and townspeople have been made voluntarily with no strings attached. We have no obligations other than to do our darndest to get this course finished and running. That's what we're going to do!"

Lancaster Superintendent Tells of Water Application During 1957 Drought

Speaking at the recent Penn State Turfgrass Conference, William F. Mellon, supt. at Lancaster (Pa.) CC, gave an interesting talk on how he and his staff went about saving the turf and what it cost at his club during last summer's severe drought.

As Mellon pointed out it was fortunate that the original pump with 325 gpm capacity was replaced in the spring of 1957 by a 640 gpm unit. From May through September, rainfall deficiency in the Lancaster area was about 12 ins. To compensate for this, 23 ins. of water were applied to Lancaster CC fairways during this period.

Two young men were employed to handle the watering job. They worked seven hours per night, six nights a week. Amounts of water supplied to each fairway varied greatly. For example, No. 3, located on top of a hill, got a total of 2-ins. while No. 7, located adjacent to a creek, received only 3/4-ins. In July, 9-ins. of water were applied and in August, a total of 6-ins. In June, application amounted to 4-ins. and in May and Sept., 2-ins.

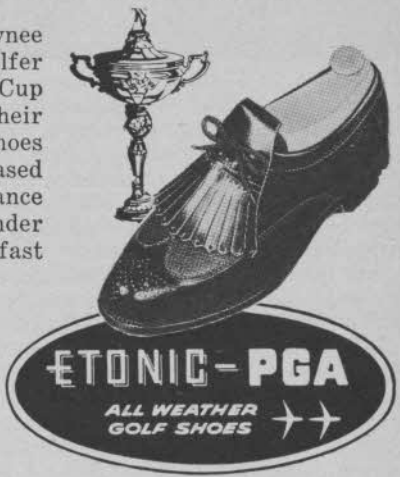
The Lancaster pump was operated for 970 hours. Seventy-five per cent of this time was for fairway irrigation. About one-fourth of the 23 ins. applied to fairways went over into the rough. Greens and tees received the remainder plus many hours of hand watering. Altogether, 35,000,000 gals. of water were consumed from May through September.

Mellon estimated that the cost of operating the pump was $2,500, an average of 7½ cents per 1,000 gals. A further breakdown of equipment maintenance plus labor showed that it cost the Lancaster club $150 to apply one inch of water to the fairways. Four of the fairways are watered by hose and on the other 14 there is a total of 84 sprinkler outlets, each of which covers about one-half acre.

1000TH GOLF PRO BUYS RYDER CUP SHOES FOR PERSONAL USE!

CONGRATULATIONS HARRY OBITZ! Here is genial Harry (Head Professional at Shawnee C.C.) holding the Silver Ryder Cup Shoe he received for being the 1000th Golf Pro to purchase this new Etonic-PGA Golf Shoe.

What makes Harry happy? This popular Shawnee Country Club professional is the 1000th pro golfer who has *bought and paid for* Etonic-PGA Ryder Cup Shoes out of his own pocket, because he prefers their soft comfort and style. These were *not* free shoes given for advertising purposes, but shoes purchased by golf pros for personal wear. With such acceptance by men who know golf shoes best, it's no wonder golfers everywhere are buying Ryder Cups as fast as we can make 'em!



NOTICE TO PROS! New 1958 Etonic-PGA Golf Shoe catalog has been mailed to golf professionals coast-to-coast. If yours hasn't arrived, please write for a copy.

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Gibberellic Shows Promise As Regulator of Turfgrass Growth

Researcher Discusses Qualities of Plant Stimulator for Rapid Germination and Reducing Dormancy Periods

By FELIX V. JUSKA
Research Agronomist, U. S. Dept. of Agriculture, Beltsville, Md.

GIBBERELLIC ACID, a plant growth substance, promotes growth of a wide variety of plants including grasses. The gibberellins, of which gibberellic acid is the most common, are isolated culture filtrates of the fungus Gibberella fujikuroi. This fungus causes a disease of rice seedlings in many countries of the Far East and in Italy, giving rise to elongation of the shoot so that diseased plants are spindly and much taller than the healthy ones.

The crystalline material causing many symptoms characteristic of the disease was first isolated by the Japanese in 1939 from a liquid portion of the culture medium on which the fungus was grown. Gibberellic acid is produced commercially by growing the fungus in a culture medium. The process is somewhat similar to that used in the production of antibiotics such as penicillin. Gibberellic acid in pure form is not readily soluble in water; therefore, water soluble formulations generally contain a water miscible solvent or the acid is converted to a water soluble salt form.

Outside of Japan, experimental work with gibberellic acid was delayed by language barriers and war. It was not until 1951 that our Dept. of Agriculture resumed work with gibberellic. It shows promise as a growth regulator since it stimulates overall plant growth at extremely low concentrations. High amounts generally show slight to severe adverse effects of over stimulation and weak plants. The action of gibberellic acid, therefore, is different than that of 2, 4-D which is highly toxic at greater concentrations. Gibberellic acid in its dry form as an acid or as a potassium salt of the acid (*Potassium gibberellate*) is apparently fairly staple. Once dissolved, the material should be used within a week or two because it will gradually lose its growth stimulating properties.

Effect of gibberellic acid in promoting growth of Kentucky bluegrass. Starting in foreground (directly behind the sign), rectangular plots were sprayed July 17, 1957, with solutions containing 10, 0, 50, 0, 100, 0, 250, 0, and 500 ppm of gibberellic. (Photo taken Aug. 6, 1957).

Probably the greatest plant response to gibberellic acid is stem elongation or distance between nodes of the plant stem. Research indicates it may help plant growers in several ways, depending upon the crop. With some crops, gibberellic treated seed may emerge earlier. It may promote more rapid seedling growth; however, rate of root growth may be reduced where stem growth has been greatly stimulated. On many ornamental plants, the acid may be applied in a lanolin paste. A small amount of the acid is dissolved in the lanolin and stirred thoroughly to form a paste which can be applied just below the growing point of the plants. Perhaps a

more common method is to apply gibberellic acid as a foliar spray.

For experimental purposes various ranges in parts per million (ppm) of gibberellic can be readily applied. For grasses, 1 to 2 ozs. per acre of gibberellic (equivalent to 100-200 ppm when 100 gallons of water are applied) are generally effective. Since gibberellic acid is a growth regulator or growth inducer and not a plant food, it will not replace fertilizer. In fact, probably more fertilizer will be needed to produce balanced growth when gibberellic is used.

Merion and Kentucky Bluegrass Treatment

Bluegrasses are relatively slow to germinate. Thus a chemical hastening germination by several days would be valuable in the establishment of turfgrasses. Rapid germination provides faster coverage, decreases erosion and enables seedlings to compete with weeds.

Seed of both Merion and Kentucky received the following treatments: a) untreated – dry seed; b) control-soaked in Water treated and gibberellic acid treated seed were soaked for 24 hours prior to planting on Mar. 28, 1957. Observations taken after germination began indicated that water soaked seed germinated as soon as the seed was treated with various concentrations of gibberellic acid. Dry seed (untreated) and seed treated with gibberellic dust did not show any difference in time of germination. Seed soaked in both water and gibberellic acid germinated 2-3 days earlier than dry seed. Other workers found water and KNO_3 treatments on Kentucky bluegrass equal to or superior to gibberellic acid. Growth after emergence was not affected by gibberellic treatments; apparently, gibberellic acid dissipates rather rapidly in moist soil.

Effect on Bermuda, Bent, Zoysia

Supts. and others using vegetative material for the establishment of turf are tremendously interested in obtaining rapid cover for new turf areas. With this thought in mind stolons of Bermudagrass, bent and zoysia were soaked 24 hours in water only or in solutions containing 5 ppm, 10 ppm, 50 ppm, 100 ppm and 500 ppm of gibberellic acid. Measurements of stolon growth were taken six times during a period of 22 days following treatment.

(See table on following page)

TABLE : Response of Bentgrass, Bermudagrass and Zoysiagrass Stolons to Gibberellic Acid Treatments Under Greenhouse Conditions

Ave. increase in length of stolons (cms.)

Treatments	Cohansey Bentgrass	U-3 Bermuda	Meyer Zoysia
Water	10.4	14.5	.3
5 ppm	13.7	6.8	.5
10 ppm	15.4	12.7	.5
50 ppm	19.0	15.4	.9
100 ppm	16.2	24.0	1.1
500 ppm	9.5	31.4	1.2

Stolons were soaked for 24 hours before planting.

Growth period: Mar. 29-Apr. 20, 1957.

Growth of Cohansey increased with each concentration of gibberellic to 50 ppm, after which increase in growth of stolons began to decrease. Treatments of 500 ppm reduced growth of stolons below that of the control. The 50 ppm treatments increased the length of stolon growth approximately 1/3 over the control. U-3 Bermula, with the exception of the 5 ppm treatments, showed a continuous increase in stolon growth through the entire range of treatments and rate of growth for Bermuda was more rapid than bentgrass at higher concentrations. Meyer zoysia stolons used for this experiment showed very little response to gibberellic acid. The 500 ppm treatments increased growth of stolons only .9 cm over the controls. This may be because zoysia species are much slower to become established from stolons than either bermudagrass or bentgrass.

Test Several Grasses

To further test the response of Bermuda, bent and zoysia grasses to gibberellic, 4-in. plugs of each species were planted in replicated plots in the field. Plugs were planted in June and allowed to become well established before treatments were applied in July. Treatments included a control, 10 ppm, 50 ppm, 100 ppm, 250 ppm and 500 ppm of gibberellic acid. The first application was made on July 17, 1957.

An application of 10 ppm gave a decided increase in growth of bentgrass over the control; whereas, considerable etiolation and yellowing began to appear at 50 ppm. Concentrations over 50 ppm affected bentgrass adversely causing thin, anemic growth. Growth of Meyer zoysia was not stimulated except at high concentrations in which case the zoysia plant grew taller and leaves became more yellow. Zoysia plants which received 500 ppm of gibberellic acid were 2-1/2 times taller than the controls; however, there was no apparent increase in stolon extension. At the higher concentrations, zoysia stolons no longer grew prostrate but began to turn upward exhibiting a geotropic reaction. Reversal of the upward growth of stolons occurred later in the season. California workers have reported that gibberellic acid applied to zoysia vegetative material did not improve the rate of turf establishment.

John Price (left), supt. at Southern Hills CC, Tulsa, recently received the GCSA 'Award of Merit' from L. E. (Red) Lambert, who presented it in behalf of the national organization. About 75 persons attended the presentation ceremonies which got wide newspaper coverage in the Southwest. Following the presentation and a luncheon, several persons at the Price party played Southern Hills to get an idea of how well John had prepared it for the Open.

Greenhouse vs. Field

U-3 Bermuda responded to gibberellic somewhat similarly to Meyer zoysia with respect to top growth, although geotropism of stolons was not observed. The high response of bermudagras stolons to gibberellic acid obtained in the greenhouse was not evident in the field; moreover, a concentration of 500 ppm inhibited growth of Bermuda selections.

A pronounced growth response was obtained in Kentucky blue by treating with gibberellic. Increased growth, yellowing and etiolation were roughly proportional

(*Continued on page* 86)

IBM Handles Handicaps for Four Cleveland Clubs

By JOE GAMBATESE

Bill Wehnes, member of the Canterbury CC in Cleveland, has worked out a handicap computing system with the Electronic Tabulating Co. of that city and four Cleveland area clubs are now using the service. A charge of $1.25 per member per season is made for computations on a once-a-month basis while those clubs that want handicaps brought up to date every two weeks pay $2.25 per member.

Here is how the system works: The member fills in an IBM card after each round and turns it over to the handicap chmn. All cards are sent to the computing firm at the end of the week. The IBM machines — puncher, verifier, sorter, collator, accounting machine and summary punch — handle the routine. One hundred names can be listed on a summary sheet, five of which are sent to each club for posting.

The card filled out by the member has blanks for inserting his name, club name, date, score and a permanent index number that is assigned to him for identification.

Based on 15 Scores

The summary sheet, based on 15 scores, if available, shows the averages of 10 low scores and five high scores. It also shows the name and number of the member and his current handicap rating.

According to Wehnes, the IBM system of computing handicaps works best if all clubs in an area agree to a standardized form for both players' cards and club summaries, and if all information is delivered to the computing firm on a day agreed upon.

One Cleveland club handicap chmn. says that the computing system's advantages are that it is accurate and uniform and takes a lot of pressure off the committee. Some clubs, however, have declined to use the electronic method because retired members like to handle the handicapping.

CMAA Retired Status

Thirty members of the Club Managers Assn. of America have requested transfer to the newly created "Retired" status. Men who are 65 years of age or older, who have been CMAA members for 15 years or longer and who are retired from active business pursuits, are entitled to transfer to this category and pay half-rate dues.

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JIM REID
Superintendent
The Suburban Club
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"We have been troubled with dry thatched areas for years. Last year I used AQUA-GRO and for the first time we were able to keep 18 greens in good condition throughout the year."

BUDDY PEARSON
Lakeside Park
Golf Club
Walters, Oklahoma

" . . . In less than one week after our greens were sprayed with AQUA-GRO, they were taking water without the usual run-off. We've had no localized dry spots since!"

Aesop Says:

"A possession is worth no more than the use we make of it."

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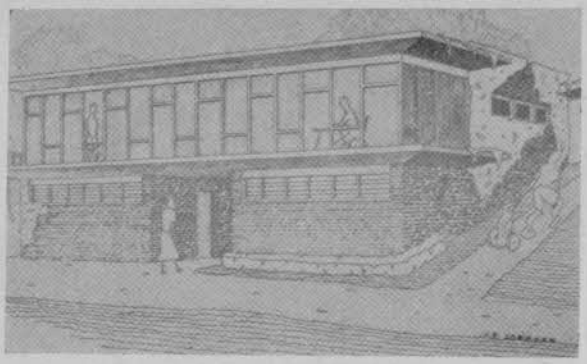

How They Built the Golf Lodge at Rock Island

Exterior and interior views of the lodge.

COMMUNITY SPIRIT, cooperative effort and just about everything else that comes under these headings went into the building of the golf lodge that is located on the course of the county forest preserve in Rock Island, Ill.

If your community is faced with the problem of trying to provide a shelter, pro shop, lounge, or whatever you may wish to call it, for golfers, Rock Island's master plan is one that you might want to copy. But before you get it launched, remember that it is going to take a lot of work.

Some three years ago it was realized that players at the forest preserve course deserved better accommodations than they were getting. But the question was, who's going to provide them?

George F. Stromberg, forestry improvement chmn., decided that the golfers themselves would have to get the lodge project rolling if it ever was to get started. A mass meeting of clubswingers proved that there were plenty of persons who were willing to lend a hand. Radio programs and newspaper articles stirred up further enthusiasm.

The forest preserve commission, taking note of the popular demand for a golf lodge, voted to give all proceeds of one month's play (August, 1956) to the movement. This amounted to $4,700, leaving a balance of about $6,000 to be raised.

Women Play Big Part

A tag day, sponsored by the golfers with the assistance of Stromberg's department, brought $838 into the coffers. A ham dinner at the course was good for another $789. Women players, incidentally, outdid the men in getting behind these projects and in soliciting subscriptions for the lodge. A kickoff breakfast was all that was necessary to get the ladies into the spirit of the thing.

Stromberg and A. C. Gaetjer, forest preserve supt., personally solicited $3,000 in subscriptions. Harold Strutz, pro, got the necessary number of craftsmen to donate their services to the construction of the lodge, and also negotiated for the material used in building it.

The $11,000 that was eventually raised went into materials and it was necessary for the golf committee to go once more to the forest preserve commission and ask for funds. On this occasion, $2,500 was granted. In the meantime, with a generous donation of nighttime, weekend and holiday labor, the lodge was practically completed. The $2,500 that came from the commission enabled the golfers to put the final piece of paneling and the last strip of flooring into the building.

What is the lodge valued at today? Conservatively, $35,000.

Because of this cooperation all around, it hasn't been necessary for the Rock Island forest preserve commission to increase fees to defray the cost of the golf lodge. You can still play there through the