

are going to show up from time to time. Let's accept them as a necessary part of the progress which has made possible ever higher standards of perfection in golf course turf. They should not bring criticism of the golf course superintendent. Rather, he should be encouraged to continue his quest for greater knowledge.

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Q—What is the best time of year to plant creeping bent stolons? (W. Va.)

A—In your area it will be best to plant creeping bent stolons during September. Spring planting is hazardous because of the competition of weeds, the handicap of insects and the possibility of hot, dry weather. In the fall we have cool nights and favorable moisture with less trouble from weeds and insects. Bentgrass is a cool season grass and grows best in cool weather.

Some of the most successful plantings of bent have been made in late fall when freezes occurred within a couple weeks so the ground was frozen until spring. Bent stolons are very hardy where frost is concerned.

Q—Could you suggest a reference book to help me find the answers to turfgrass problems? (Mont.)

A—“Turf Management” by H. B. Musser, published by McGraw-Hill Book Co., 330 W. 42nd St., New York 18. In it there is a great deal of valuable information on golf course maintenance. But you will not be able to turn to any one page and find all the answers. Some of the answers have been learned since the book was written.

Q—How much ground limestone should be mixed with topdressing to be applied to putting greens? (Conn.)

A—One 80 lb. bag of ground limestone for each 1000 sq. ft. would be a good application. You may expect better results if the green is well aerated before topdressing.

Q—Can 2,4-D be used to control clover on bent greens? (Ind.)

A—A mixture of 2,4-D and 2,4,5-T, commonly called Brushkiller, can be used to control clover. I would be cautious when using it on bentgrass greens.

Begin with a very light rate, probably less than half of the recommended rate for bent fairways. Make some limited test applications to determine whether or not your bentgrass will be injured by the chemicals. Light applications of Brush-

killer will remove clover, but I repeat that it must be done very carefully and at light rates to avoid damage to the bentgrass.

After clover has been removed then you must follow good practices to develop a dense, vigorous turf; otherwise, clover will invade again.

Q—What is the best procedure for planting a green with Bermuda sprigs? (S. C.)

A—The method of planting sprigs on the putting green is quite similar to that used in planting bent stolons. The shredded sprigs are evenly spread over a prepared, well-limed, well-fertilized seedbed. Roll, topdress, roll again and keep adequately watered until the grass is well-established.

This method is particularly good with the newer finer types of Bermudas.

Q—What is the best type of fertilizer to use for Pennlu creeping bent? (Vt.)

A—Pennlu does not require any special type of fertilizer. In preparing the seedbed use a 10-10-10 (or similar) fertilizer, about 40 lbs. to each 1000 sq. ft.

After you start to mow, fertilization with $1\frac{1}{4}$ to $1\frac{1}{2}$ lbs. actual nitrogen to 1000 sq. ft. each month is needed.

This can be made by applying half that amount every two weeks. The fertilizer may be a good organic type or a soluble fertilizer. Either type will give good results if handled properly.

Q—What is the best way to get rid of chickweed in a green? (N. J.)

A—Chickweed in putting greens can be discouraged by applying arsenate of lead at 5 lbs. to 1000 sq. ft. at monthly intervals until you get results. This method is slow.

Quicker results can be obtained with sodium arsenite used at 1 lb. to 100 gals. of water to 1 acre (approximately 44,000 sq. ft.). Repeat every 7-10 days until satisfied. This will brown bent a little, but will not hurt it permanently.

A third method is to spray with the new di sodium methyl arsonate weed-killer. Use half rate or 11 lbs. of 31.5% material to the acre in 200 gals. of water. This is equivalent to 4 ozs. to 1000 sq. ft. Test it first in your nursery. Repeat in 7 days. A third application may be necessary.

Q—I've heard of shredding Bermuda stolons with a vertical mower. How do you go about this? (Ga.)

A—This method depends a little bit up-

on the condition in which you acquire the Bermuda stolons. If you have Bermuda sod which has been stripped with a sod cutter, it is easy to feed into the vertical mower.

Place the machine on two saw horses, with a piece of plywood in front to serve as a guide when sliding the sod into the blades. There should be another piece of plywood under the machine so the blades have something solid on which to act and can tear the sod to pieces more efficiently.

If the Bermuda sprigs come to you rather loose, then just throw them down on the ground and pass the vertical mower back and forth over them. This does a very good job of shredding the stolons so they can be handled more effectively.

Q—We are planning a new course and want to do it right in the first place. What is the best grass for fairways? (Mich).

A—The best grass for fairways depends upon the type of management you will be able to give it.

Will you be able to maintain creeping bent fairways with regular watering, close, frequent mowing and all the care they will need? Or is it to be a more naturalistic type of fairway composed of bluegrasses and fescues, mainly under a no-watering program? The management makes all the difference in the world.

If fairways are to be unwatered, I would seed a mixture of Kentucky bluegrass and Merion bluegrass with some creeping red fescue as a nurse crop, considering that the red fescue probably might not survive as a permanent grass.

For a creeping bent type of fairway, then in addition to seeding I would introduce some stolons of the sturdier types of fairway bents. These are general recommendations. Actually, one should have more complete information about management intended and degree of perfection desired before arriving at a decision. I will be glad to go into more detailed discussion with you.

Q—What research is being conducted on *Poa annua* control? (Md.)

A—A great deal of research is going on at the present time at several experiment stations across the country. Work is in progress at Rhode Island, Penn State, Purdue, California and probably at some other stations.

Some of the most promising work goes back to the practice of many years ago

of applying arsenate of lead which is doing quite an effective job of controlling *Poa annua*, chickweed, and other weeds, on putting greens, where the phosphorus content is medium to low.

Caddy Bonus System Gives Boys Competitive Interest

By ORVILLE W. CHAPIN

Professional, Ft. Wayne (Ind.) Country Club

AFTER some experimenting we worked out at our club a caddy bonus system that gives the boys a fair break and rewards the youngsters who are dependably on the job as competent and interested caddies.

Our first system gave the boys a bonus at the end of the season but it didn't work as well for the boys or us as the present system, with more competition, has worked.

Our present system keeps the boys coming out in October when weather is favorable and it has been helpful in enlisting for our members a good supply of caddies.

There is a balance left in the fund which is used for a caddy party early in the season. We usually have two or three parties for them. On one Monday they have exclusive use of the pool for half a day. We have a caddy tournament late in the summer, just before school starts.

Our Caddy Bonus System:

The purpose of a bonus system is to encourage boys to report regularly for assignment and to reward those who do report regularly.

Source and Amount of Bonus Fund

The bonus fund will be accumulated through a bonus charge on each caddy fee as follows:

1. Nine holes single.....	10 cents
2. Nine holes double.....	20 cents
3. Eighteen holes single.....	10 cents
4. Eighteen holes double.....	20 cents
5. Each ball-chasing assignment	10 cents

(It was estimated that this schedule would yield a total bonus fund of \$1200, but last year it totaled \$1390.)

Distribution of Bonus Fund

Distribution of the bonus fund will be made to caddies based upon bonus credits in accordance with the following:

1. On September 8, the 20 caddies with the highest number of bonus credits will receive 30% of the fund at that date, or