In Great Britain several slightly differing dimensions are used for bowling greens, but in America a green is generally 120 feet square. It may be played North and South or East and West, and will make six courts or rinks each 19 feet wide or eight courts each 14 feet wide.

The following details for a bowling green have been supplied through the courtesy of Mr. Arthur H. Hartley of Clearwater, Florida.

A six foot walk or bank should be allowed all around the court, and all sides should be provided with a ditch 12 inches wide and 6 inches deep. All lumber for edgeboards, backboards and stobs should be pressure treated.

A 2" x 6" edgeboard and a 2" x 12" backboard will be needed to form the ditch. These should be held in place by 4" x 4" stobs.

The base should be of eight inches of crushed stone with a six inch surface of good soil for the top surface. If the location and soil has poor natural drainage, the green should be slightly elevated and also have a six inch tile below the crushed stone base all around the court.

Most bowling greens in Southern California have Seaside bentgrass. However we believe that some of the vegetatively propagated clones such as Congressional, Old Orchard, or Arlington, would be superior if properly managed.

Some clubs with heavy play have found it advisable to introduce bermudagrass into the bentgrass to improve wear resistance. At Santa Ana, common bermudagrass has been used and under close mowing has assumed satisfactory habits of growth. The U-3 strain of bermudagrass has been used similarly at Laguna Beach, with much success.

Our experimentation with the bermudagrass-bentgrass combination on the experimental plots at 300 Veteran Avenue, indicates that this combination can be expected to be excellent in color and appearance at all seasons of the year. It should be investigated by those clubs which have unusually heavy play. The two combinations of proven excellence thus far are the U-3 strain of bermudagrass with either Congressional or Old Orchard bentgrass.

A new word for the dictionary

The American Society of Agronomy has officially sponsored the word “turfgrass” as a replacement for the word “turf” in connection with the culture of grasses because of the association of the latter term with the sport of racing. Because of the influence of this Society, “turf conferences” and “turf culture” will doubtless soon be things of the past.

Prof. V. T. Stoutemyer was recently appointed to membership on the Turfgrass Committee of the American Society of Agronomy.

**Recent Gifts**

Northwest Metal Products, Inc.
Seattle, Washington

Beauty Barrow

West Point Products Corporation
West Point, Pennsylvania

Verticut Lawnmower

0. S. Baker
Miami, Florida

10 lbs. bahiagrass seed

Florida Feed & Seed
Ocala, Florida

10 lbs bahiagrass seed

Northrup, King & Company
Los Angeles, California

5 lbs. grass seed
EVALUATION OF BERMUDAGRASS STRAINS
C. Gordon Wyckoff and V. T. Stoutemyer
Department of Floriculture and Ornamental Horticulture
University of California, Los Angeles 24, California

The improved strains of bermudagrass which, at the present time, can be propagated only vegetatively by planting of stolons, offer some definite advantages over the common seeded bermudagrass. In all cases the texture is finer, and the sod is tighter so that crabgrass and other weeds are usually crowded out. In some cases the grass is more drought resistant and in some, green color is retained longer in the winter. However, no strain of bermudagrass which has been tried has given completely satisfactory winter color during the entire period of cold weather and it is probable that no amount of breeding will ever produce a strain which is completely dependable in this respect.

Since the initiation of a research program in turfgrass culture on the Los Angeles Campus of the University of California, many different strains of bermudagrass have been tested. Several have been distributed and used in various ways to a limited extent. At the present time it is difficult to state with certainty which is the best. All have certain advantages and disadvantages but none approaches perfection. The following five seem to have sufficient merit to justify further trial.

1. U-3 bermudagrass. This strain is notable for survival in cold climates. It has a fine texture, is slower growing than most strains, but will eliminate common bermudagrass. The winter color is better than that of common bermudagrass but it has not lived up to expectations in any but the mildest areas. It rarely produces seeds, but produces a number of seed stalks at a certain stage of growth in early summer. This objectionable feature is fortunately transient. Few if any strains equal this one in drought resistance. In one of our tests in which plots were carried through the summer with two irrigations, only the Tifton No. 55 strain approached the U-3 in this respect. The U-3 strain produces a remarkably dense root system and has great wear resistance. It is definitely a good grass for athletic fields. In combination with desirable strains of bentgrass such as the Congressional or the Old Orchard and mowed at putting green height it is outstanding at all seasons of the year. In spite of certain shortcomings, it has some advantages and this strain is still worthy of serious consideration. One of its merits is that it starts to grow in late winter before any of the other strains.

2. The Everglades No. 3 strain. This was released from the Everglades station of the Florida Agricultural Experiment Station. It is particularly good near the coast since it rarely produces a seed stalk. However, in the warmer sections such as the San Fernando Valley or at Arcadia, it produces them freely. The texture is moderately fine. It is a vigorous grower which will displace a strain such as the U-3 in direct competition. The winter color is retained longer than is usual with most strains and the summer color is also unusually rich. This strain has been much used for putting greens in Florida.

(continued on last page)
Lawn Bowling in Southern California is governed by the Southern California Lawn Bowling Association. Lawn bowlers in this section of the country are singularly fortunate, inasmuch as weather conditions permit the playing of their favorite game practically the year round.

There are twenty-one clubs in the district - from Santa Barbara to San Diego - and bowlers from all parts of the world acclaim the greens in this district as being among the finest in the world. Some of the clubs have only one green; several clubs have two greens. The Beverly Hills Club has three greens, which are visited each year by lawn bowlers from different parts of the United States, Canada, New Zealand and Australia. The greens at Arroyo Seco - four in number - are among the best to be found anywhere, and will be the scene of the National Championship Tournament to be held this year. The tournament will last one week, and it is expected that contestants will be present from all parts of the country.

In many of the cities where bowling is played, it is possible to play the game in the evening. Unfortunately, it is not possible to do this in the Los Angeles Neighborhood, due to the heavy dew. Nevertheless, it is possible to play practically every day, and visitors are always welcome to participate either as spectators or, if they are interested in taking up this unusually fascinating and healthful sport, there are always members of the various clubs who are happy to demonstrate the game to prospective members and get them started on what invariably turns out to be one of the happiest experiences in a player's life. A cordial invitation is extended to anyone interested in taking up the game to visit any of the greens. It might be of interest to indicate where the bowling greens are located. Here are the different cities and locations:

- **Los Angeles**: four greens at Arroyo Seco between Avenue 57 and Avenue 60 on the Pasadena Freeway; two greens in Exposition Park.
- **Beverly Hills**: three greens at Roxbury Park, corner of Roxbury Avenue and Olympic Boulevard.
- **Claremont**: one green at corner of Fifth and Indian Hill Boulevard.
- **Glendale**: one green at 201 Colorado Street.
- **Hermosa Beach**: one green at Clark Stadium.
- **Holmby Park**: one green at Comstock Avenue, just north of Wilshire Boulevard.
- **Laguna Beach**: two greens in Heisler Park at 466 Cliff Drive.
- **Long Beach**: three greens in Recreation Park.
- **Newport Harbor**: one green at 15th Street and Bay Front.
- **Pasadena**: two greens in Central Park at 275 South Raymond Avenue.
- **Redlands**: two greens in Sylvan Park.
- **Riverside**: one green in Fairmount Park.
- **Santa Ana**: one green in Santiago Park.
- **Santa Anita**: two greens in Arcadia County Park, Huntington Drive and Santa Anita Avenue.
- **Santa Barbara**: one green located at the corner of Anapamu and De La Vina.
- **San Diego**: two greens in Balboa Park, Laurel and Seventh.
- **Santa Monica**: one green at corner of Chelsea Avenue and Wilshire.

This enjoyable game can also be played by ladies, and there are many enthusiastic women bowlers in Southern California.

From time to time games are played between the United States team and lawn bowlers from other countries. In 1947 a team of thirty bowlers from the British Isles made a tour of this country, and spent a most enjoyable month in California. Plans are at present being formulated for a visit from bowlers from the Province of Ontario, Canada, next spring. Players from this country also have made visits to the British Isles.

Lawn bowling is probably the most "strictly amateur" sport in the world. There are no professionals.
3. Texas T-35A. This strain is notable for fine texture, good color and quality together with great vigor. It has performed well in the nursery at the Los Angeles Country Club. The rapid growth of this grass would suggest that it should be tried on tees. It has not been evaluated as thoroughly as the two preceding grasses, but it appears to be a desirable grass. It is too rapid a grower to be desirable for lawns.

4. Magennisii. This is a hybrid of the common and the African bermudagrasses. There are other hybrids of this type, but those which we have tested are excessively productive of seed stems during much of the year, which is very detrimental to the appearance of the grass. This strain is relatively free of this fault. It has an unusually fine texture and good color, and is probably the most beautiful strain of bermudagrass.

This strain is similar in appearance to African bermudagrass, Cynodon transvaalensis. The leaves are fine and relatively short and narrow. They are sparsely hairy on both surfaces. However, in the number of primary nerves in the leaf blade it is closely similar to common bermudagrass, Cynodon dactylon.

In the Gulf Coast States some strains of African hybrid bermudagrass have not been able to keep out the invasion of common bermudagrass. This strain has not been evaluated from this standpoint under California conditions.

5. Uganda Grass. We do not know where this grass belongs botanically. Dr. Fred V. Grau, who supplied our stock, does not believe that it belongs to the African bermudagrass group, although it is very fine in texture. This grass was first called to our attention by Dr. M. Zaki Mahdi who observed its interesting qualities in his native city of Cairo, Egypt.

According to Dr. Grau, this grass survived five winters at Beltsville, Maryland. In that locality it survived neglect and was observed to be a rapid spreader and highly resistant to weed invasion. It tolerated close mowing and the excellent quality attracted the attention of all who saw it.

We plan to test this grass alone and in combination with cool season grasses as soon as possible.

6. Other Strains. Some of the strains of bermudagrass which have gained wide popularity in the Southeastern states seem to us to have no particular merit for this area. It must be remembered that many of these strains were developed primarily for resistance to diseases which are not troublesome here. An example is the famous Tifton No. 57 which is so widely used in the Southeast. We can see no place for it here in spite of its undoubted merits for a certain area.

We shall be interested in obtaining plugs of bermudagrass from sod areas in California where the texture, winter color and quality seem to be unusually good. Probably some superior types may be found locally.

We would again repeat the warning against attempting to introduce vegetative material of grasses from any of the Gulf Coast States because of the serious pest, Rhodes Grass Scale, which has become established there.

The U-3 strain can be obtained from
Ed Newkirk
1436 Kelton Avenue
Los Angeles 24, California

Carroll Lorbeer
530 Pico Boulevard
Santa Monica, California

It is to be hoped that other strains of proven merit will soon become available commercially.