suggested that the mower be set at  $\frac{1}{2}$  inch. If set lower the mower is apt to cut into the stolons and retard their growth. As the area improves in smoothness the mower can be gradually set lower until it reaches 1/4 to 3/16 inch.

4. Moisture. During the application of fertilizer and compost, ample moisture should be available, for this is needed to firm the compost, to place it in contact with the growing stolons, and also to increase the availability of the fertilizer.

5. **Diseases.** A sharp watch must be kept to detect the occurrence of diseases. At the slightest indication of a disease attack apply the necessary treatment.

A green properly constructed and prepared; planted with an improved strain of putting-green grass in late August or early September; and adequately maintained should produce a satisfactory playingsurface by the following June. A green so developed will cut down excessive aftercare and will help to eliminate many headaches due to turf injury arising from faulty green construction and inferior grass. Such a green will be of beauty, utility and value to any golf club, provide enjoyment for the players and turf of which the greenkeeper can be proud.

## Superintendents Tell Why Nurseries Are Needed

Robt. Scott, Sr. of Five Farms, Charles Treacy of Congressional and Wm. Glover of Fairfax presented a round-up on turf nurseries to fellow members of the Mid-Atlantic Assn. of Golf Course Supts. In the association's Turf News Letter, the three testifying authorities were quoted as most frequently referring to Arlington (C-1), Congressional (C-19), and Dahlgren (C-115) bents; Merion (B-27) bluegrass; U-3 Bermuda; and the zoysia grasses.

Summarizing major reasons Scott, Treacy and Glover gave for establishing a turf nursery:

1. In time of emergency a turf nursery is essential.

2. Turf nurseries of improved strains of grasses pay for themselves many times over — a case of "having your cake and eating it too."

3. When re-turfing a green, stolons from the stolon nursery give the quickest and most satisfactory cover. Healthy viable stolons that lift easily with their root systems intact can be obtained by topdressing between the nursery rows with peat or sawdust. Stolons were recommended when the green can be taken out of play. Should the green remain open for play, the plugging method of introducing new strains of grass is very satisfactory.

4. By introducing plugs of turf into a poor green, not only are improved turf grasses introduced, but also the soil structure of the green is changed painlessly. By introducing a good soil mixture attached to each plug, it is possible to improve considerably a poor green without a major operation. A good portion of this conversion can be accomplished with normal cup changing. It is understood that if the plugging method is used the putting green nursery should be established on the type of soil mixture desired in your present greens. It should be understood further that plugging will not alleviate all built-in headaches such as impervious clay layers and lack of sufficient subsurface drainage. In many instances complete re-building will be necessary.

5. A turf nursery is an ideal place for testing new fungicides, herbicides and other chemicals. It is a valuable place to experiment without risking putting greens and other areas on the golf course proper.

6. In addition to alleviating problems on the golf course, a turf nursery is valuable for general landscaping around the clubhouse.

7. A turf nursery is a Golf Course Superintendent's proving ground. It is a place where he is able to observe the performance of new strains of grass. After they have been proven to the superintendent's satisfaction in his own nursery, their ultimate use can be decided upon. Research workers make valuable recommendations but each superintendent should test recommended grasses under his own growing conditions.

8. On days when employees cannot work on the golf course they can be kept busy with nursery work.

9. A turf nursery aids each superintendent in the identification of new strains of grass, and if only for the purpose of enhancing his position as a turf specialist he should have three grasses in his nursery.

10. The nursery can be used as a lever to action. If club members see how well grasses perform in the nursery, the superintendent easily can "sell" the members on changing over to the newer and better strains.

11. Public interest in better turf grasses for all purposes is furthered through the establishment of turf nurseries. Public recognition of improved turf should be stimulated by the Golf Course Superintendent.

12. To convert nursery rows of bent, bermuda, and zoysia into sod, topdress in between the rows as the grasses spread. If regular mowing practices have been adhered to the need for topdressing may be eliminated. If the nursery rows have been allowed to grow tall for stolon or seed production a gradual decrease in the height-of-cut will benefit the sod.