

golfer demands close cutting, and such treatment in time results in a thinning of the turf and invasion by undesirable weeds. There is no real way to bring the course superintendent and the golfer together on this issue unless a grass can be developed which will stand close cutting over long periods of time. A disease resistant bent grass would appear almost ideal for this purpose, the job being to develop such a strain.

**12** **THE WASH-BOARD EFFECT** is another difficulty in fairway maintenance resulting from fast mowing. This probably is the fault of the machinery since it is not geared for rapid movement over the long expansions of grass. Investigation and research toward developing better fairway mowers might eliminate washboarding when the tractor operator drives at a rapid pace.

**13** **FERTILIZING:** In spite of the fact that many fertilizer tests have been conducted over a long period of years, there is still uncertainty as to the best kind to use for maximum benefit to fairway grasses. The recommendations vary widely and probably will continue to do so, but ratio and formula could be more certain than at present. Perhaps plant tissue tests may help in arriving at a satisfactory solution.

**14** **ERADICATING CLOVER AND WEEDS** by large scale efficient methods is being investigated. The 2,4-D weed killer is effective for doing this job, but equipment to apply it on an efficient and economical basis needs to be adapted to the golf course. Fairly large booms attached to power equipment probably is the best answer for large areas.

**15** **LOW LYING WET AREAS** need to be drained or made into artificial ponds. Various methods of drainage exist. The one to use is not always too evident. Tile drainage appears practical where there is some place to lead the water away from the low spots. Ditching is also excellent providing the slope and removal points are satisfactory. If these conditions do not exist, it may be that low areas should be built into small lakes or that some type of subsoil drainage must be provided.

**16** **THE GRASS MIXTURES** to use on fairways for different soil types continue to be somewhat of a puzzle. As many mixtures will be suggested as there are people who think about them. Few individuals agree on the proportion of one grass to the other to use, and sometimes don't even agree on the species to be included. Uniform tests conducted on a regional basis is one possible answer.

#### Over-All Problems

**17** **THE INSECT PROBLEM** continues to be with most golf courses. The chinch bug has been particularly bad in the East during the last 3 or 4 hot, dry seasons. The Japanese and Asiatic beetles and their grubs are widespread in the eastern United States, and the June beetle and its relatives are in the mid-west. Economical and efficient insecticides are needed as well as methods for detecting injury promptly before large areas become infested with these insect pests. Lead arsenate will control grubs but it is expensive and poisonous. DDT or Sabadilla appear to be one answer to the chinch bug.

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New clubhouse of Oyster Harbors club, Cape Cod, Mass., is fine example of close cooperation of architect, manager and pro. John Barnard, Boston, is architect. John J. Fitzgerald, noted manager who is credited with making Oyster Harbors most popular vacation spot on the Cape, and Jean Anderson, the club's valued pro, teamed in helping make the new layout ideal from an operating standpoint. Building is on a hillside and adjacent to first tee. First floor is on fairway level and ground floor, which is above grade, is level with parking space in rear. Lockers are provided for 150 men and 100 women. Grill room is in knotty pine, Cape Cod fashion, with large fireplace and big bay window. Adjoining grill is terrace which commands view of course, especially 18th green. Opposite the grill is the pro shop. A caddy room, with recreation and toilet facilities for the kids, is on the lower level, apart from guest activities.