

perior to that of older, more expensive, and time consuming methods. It also has been found that, although the formula for the soil mixture is of great importance, the thoroughness of the blending operation is even more so.

As a rule, various proportions of sand, peat moss and topsoil make up the basic green mixture. Proportions vary on each course, depending upon the physical properties of the available ingredients as well as budgetary limitations. Sand and peat moss, purchased off the site, are trucked into the course and stockpiled at each green location.

#### **Pre-mixing Operation**

Topsoil is, in most cases, obtained from the golf course site and also stockpiled with the sand and peat moss. The ingredients are measured by volume and pushed together in a pre-mixing operation, after which the materials are ready for the important step of screening and blending. A front-end loader is used to charge the hopper of the shredder where the materials are thoroughly screened, mixed, shredded, and discharged on to the green sub-surface and spread over the putting surface to the required depth.

The important consideration here is uniform blending and screening of all materials. If sand, peat and topsoil are not thoroughly mixed there is the danger of layering with the resultant bad effects of poor water penetration. Also, the delivery of the mixture on the greens free of all stones, sticks, roots or refuse of any kind eliminates maintenance problems, provides a truer putting surface for the players and speeds up grading and seeding for the contractor.

#### **Weather Factors Involved**

The need for speed in taking advantage of dry weather is important to those in course construction. The number of greens completed in a day depends on the size of the green and the consistency and moisture content of the materials involved. Rain or excessive moisture, for example, can slow down or completely stop work. Larger greens require from one half to a full day to process the mixture.

It is now possible to prepare and screen material to cover as much as 11,000 sq. ft. of green in a day. This was not the case prior to the innovation of specialized soil processing machines, such as the Paul Bunyan. Nor was it possible to blend the mix, and remove debris, as completely and effectively as by the Royer method.

Not only is the putting mixture and sur-

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## **Prosperous if not Booming**

A survey of semi-private club operations, recently completed by Golfdom, indicates that the pay-play clubs generally are enjoying prosperous if not boom conditions. Play and pro shop sales for the past year are up by a comfortable percentage over the increase in the cost of operations, and owners and operators are almost unanimous in predicting that business will continue to improve.

Here is how the situation looked following Labor Day, compared with the previous year:

Average no. of rounds (1962)—31,000

Average increase in play—12 per cent

Pro Shop sales increase—9 per cent

Average increase in cost of operations—4.5 per cent

Maintenance costs (per hole)—\$2,823

Property improvements (since 1960)—\$25,000 average

Planned improvements in 1963—\$3,000

Per cent of rounds played by women—17

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face drainage of the greens a critical part of the work, but so is the sub-grade or sub-surface that is prepared prior to the application of any mixture. The course architect has planned the surface contours by taking into account the surface drainage, playability and maintenance procedures. The sub-surface grading must conform to the grading planned by the architect for the finished putting surface to allow surface water to drain to the tile lines in the most direct manner possible.

After the sub-surface is graded and the green mixture applied, the finished grade is worked into shape and harrowed to a final, smooth finish. Grading a green calls for superior precision and skill and accounts for the need of a specialist.

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#### **Play Around Plastic**

Doglegging around what is said to be the world's largest plastic-lined lake is California's newest 18-hole Par 3. It is built of 220,000 cubic yards of earth scooped out to form the lake and extends to 2,200 yards.

The course is located in Antelope valley, 96 miles north of L.A., in California City's recently opened Central Park. It has a practice green and driving range with 25 elevated tees in addition to the Par 3. Target greens are located on the range.