

Fork lift, handled here by Charles Conrow, is used to pick up pallets behind harvest and load trucks for transport. The Rapps maintain two forklifts, one in the field and one which is towed behind a 10-wheel truck.

lift and market sod within a year after seeding.

A Princeton turf harvester is used along with forklifts to handle the palleted sod. Normal production from the harvester is about 7,000 square feet per hour, though the top capacity of the machine is somewhat greater. Two forklifts are needed, one in the field and one which is towed behind a 10-wheel delivery truck. Bob Rapp also uses two additional trucks which are tractor-trailers with mounted booms. These latter trucks are used for distant deliveries or those beyond 40 miles which is the practical limit for towing the fork lift.

Sod is sold to landscapers, garden centers, builders, developers, golf courses, and a few sales direct to homeowners. Rapp says the operation is equipped so that they can operate with only 8 men. This permits them to keep better quality labor, he believes, and to run a more efficient operation. S o d is generally harvested in the morning, and then can be delivered during the remainder of the day. Seasonal variations have proved a problem to Rapp and other growers in New Jersey and surrounding states. Two years ago, the weather was so dry that one inch of irrigation water disappeared into the soil almost immediately. Rapp uses a portable irrigation system with Marlowe pump. By contrast, the next year was wet to the point that they found it difficult to lift and deliver sod.

Rapp found that the biggest boost to their marketing program proved to be a 4-color promotion folder. A professional photographer was hired to shoot both field and home site pictures and a folder planned to point up the value and beauty of the Rapp instant lawn. These promotion pieces were sent to landscapers, garden center outlets, builders, developers, golf course superintendents, and others who were prospective sod purchasers. This, Rapp said, put their product on the market and helped establish them in t h e industry. They believe it the single most important step beyond production of a quality product.

## MSU Tips on Sodding For Rapid Rooting

Michigan State University studies indicate there are several important guidelines to insure successful sodding results.

For most rapid sod rooting, MSU specialists point out that sod should be cut ½ to ¾-in. thick. When laying sod, the underlying soil should be moist to give roots a better chance to establish themselves quickly and firmly.

MSU also recommends that soil for sodding be prepared just as it is for seeding. Avoid laying sod on a subsoil because grass does not readily take root in subsoil.

## Turf Becomes Big Business For Pennsylvania

Pennsylvania Crop Reporting Service reveals that \$231,353,328 is spent each year on maintenance of turfgrass areas in Pennsylvania.

Areas surveyed by the Service included home lawns, schools, sod growers, golf courses, airports, athletic fields, cemeteries, churches, apartments, motel and hotels, parks, state highways, and the Pennsylvania Turnpike.

The 231 million dollar turfgrass expenditure includes \$66,-557,307 value for unpaid family labor on 2,250,309 home lawns. Replacement value of turfgrass equipment in the state is \$333,-908,568.

L. H. Bull, Secretary of Agriculture for the Commonwealth says that this makes turfgrass the largest single agricultural enterprise in the state. It was equal to 63 percent of the total cash receipts from the sale of all agricultural products for 1966.