Plastic Netting — Continuing Research

COMMERCIAL SOD growers in Delaware are now being shown a remarkable new production system which promises to cut growing time from two years to a year or less. The system, which uses plastic netting as a sod base, was developed by Dr. William H. Mitchell, extension agronomist at the University of Delaware.

The normal sod production cycle in the Delaware area requires about two years — from initial seeding through establishment phases and finally to lifting and reseeding. In many cases, says Mitchell, turf grasses will be attractive and marketable in a period of six months. But they can't be lifted until a year or more later because of sod weakness. It is costly to maintain sod fields for this additional growing time. In fact, this factor has much to do with limiting the sod market to people and organizations with higher incomes.

There's another problem that goes along with traditional sod production techniques. This is the loss of topsoil. Removal of topsoil is inevitable in sod development. With its loss the producer is faced with progressively declining productivity of his fields and higher operating costs.

Mitchell has been experimenting with a system which helps shorten the production cycle at the same time it reduces topsoil loss. His system involves the use of plastic netting as a sod base. The netting makes harvests possible within months of seeding by providing the necessary tear strength for new sod. It also permits sod removal with considerably less topsoil.

Two types of netting are being tested. The first — VEXAR — is a product of the Film Department of E. I. DuPont de Nemours and Company. The other — DELNET — is manufactured by the New Enterprise Department of Hercules, Inc. Both materials have proven quite effective in field tests so far.

Mitchell has developed a very efficient technique that permits growers to lay netting and plant turf seed in one simple rototiller opera-

(continued on page 30)

Plastic netting functions as a reinforcing member in a sod sample. Some six-month-old sod was tested to a pull strength of 200 pounds when grown with netting.

Dr. William Mitchell (left), extension agronomist at the University of Delaware, places netting-reinforced sod on a machine designed to test the pull strength of sod.

NETTING *(from page 26)*

tion. The technique is especially efficient since it takes advantage of the way in which soil is thrown back during normal operation of the rototiller. So simple is the whole set-up that it requires a single pass over a field — thus cutting down on both labor and fuel costs.

Last fall Mitchell demonstrated his system on an acre of land at the Sandtown farm of Bill Colemen, a Delaware sod producer. Sod on that acre is now well established and ready for harvest. Samples of the six-month-old sod have tested to a pull strength of up to 200 pounds. Two-year-old sod without netting often has a test strength of 75 pounds or less.

The agronomist says there's still work to be done to perfect the new system. The economic advantages for sod production with plastic netting have to be more exactly established, for one thing. There are a lot of factors to consider—cost of netting, land value, time required to complete the sod production cycle and percentage of recovery of salable sod.

But it looks now as though the system can double sod production by cutting growing time in half. And this is a powerful argument in its favor. It's no wonder that Mitchell is starting to get requests from other area sod growers to demonstrate the new technique on their farms, too.

Princeton Manufacturing Company builds three basic models of sod harvesters which cut and palletize sod in one operation. The most recently developed model is designed with maximum flotation to permit operation in extremely soft conditions.

New Sod Harvesters Meet Need

The Princeton Sod Harvester had its origin at Princeton Turf Farms of Hightstown, New Jersey, where Wiley Miner worked extensively to create a much-needed mechanized method of cutting and palletizing sod in one operation. From that beginning, in cooperation with Miner, the harvester was further developed and modified by the owners of Eastside Nursery, Inc., of Canal Winchester, Ohio. In August of 1972, the principals of these two sod-producing firms, with Syl Schloesser as manager, formed Princeton Manufacturing Co. The new Company operated initially at Canal Winchester, Ohio.

Harvesters have since been built and sold to volume-producing sod growers throughout the U.S. The company has offered remodeling services to purchasers of the originally-designed harvesters as well as new models designed to meet the individual needs of these customers. The harvesters have been so well accepted that expansion of the manufacturing facility has been necessary. The plant and offices are now located at 2625 Johnstown Road, in Columbus, O. Its location, adjacent to Port Columbus, provides excellent shipment facilities for servicing the needs of the customers.

The company builds three basic models. The model No. 4816 is designed to produce 16" wide sod, where vegetative regrowth is required, or where weight due to thickness of cut or sand conditions require small pieces for handling. The model No. 4020, designed as a new 'standard' in mineral soil sod production, cuts 20" wide slabs, 40" long. The 40" square pallets enable maximum yardage to be trucked per weight and width restrictions in most states.

The company's latest development has been their model No. 4824 harvester which is designed with maximum flotation, to enable operation in extremely soft conditions, such as peat or muck soil. It cuts 24" by 48" slabs and permits palletizing of 100 yard pallets.

All current models include 'counting' devices to create uniform pallets as well as an automatic weighing system to assist in permitting maximum trucking efficiency. Flotation tires prevent damage to uncut sod on this harvester which is designed for the sole purpose of producing palletized sod.

The company intends to remain cognizant of the needs of the Sod Industry and is working not only on new and better ways of sod harvesting but on additional allied equipment for the industry, also.