Sewage Sod System Saves Time

By DR. HENRY F. DECKER

The author is president of Buckeye Bluegrass Farms and the developer of the new sod producing system. Decker was a botany professor at Ohio Wesleyan University for ten years, has had practical experience in sod farm management and has served as a consultant to O. M. Scott & Sons and several lawn care companies.

A NEW, quicker and reportedly less costly system for growing sod has been developed from experiments over the past five years at Buckeye Bluegrass Farms, Inc., Ostrander, Ohio.

Compared to the conventional method of growing and harvesting sod, which often takes a year or more, and requires large quantities of topsoil, the new system produces harvestable sod in a few weeks, reduces shipping weight by 30 percent or more and requires less labor. Sewage sludge, composted leaves or garbage, stack dust — any number of waste materials — are substituted for topsoil. Given the retail cost of sod at $2,500 per acre minimum (central Ohio), the process makes it possible for an industry with a waste problem to dispose of it economically.

The variations in the process are enormous, depending largely on the type of waste material utilized. And while its execution is slightly more exacting than growing conventional sod, the system consists simply of placing a suitably rendered growing mixture over a root impenetrable barrier, such as polyethylene sheeting, and allowing the extensive, primary rooting of the grass to knit and bind the sod. Pregerminated seed is recommended and the irrigation of the growing mixture is more critical in the initial stages.

In the conventional method of growing sod the primary roots of the grass are cut off by the sod cutting machine in which case the knitting and binding of the grasses is a function of their tillering, rhizomes, and stolons. The slowness of these growth processes account for the relatively lengthy period of time necessary to grow a conventional sod so that it will stay intact when harvested.

The new system capitalizes on the tremendous capacity for grasses to quickly produce a primary, fibrous, root system (a single grass plant has been known to produce over 350 miles of roots in 17 weeks or less). All primary rooting is kept intact, being unable to penetrate the plastic sheeting; hence the sod binds quickly and can be rolled up in a few weeks. The undersurface of the sod is a ratehr impressive, white mass of primary roots which can quickly bind the sod to its new site. Much is a rather impressive, white mass of new sod since its rooting system is intact and not cut off as with conventional sod.

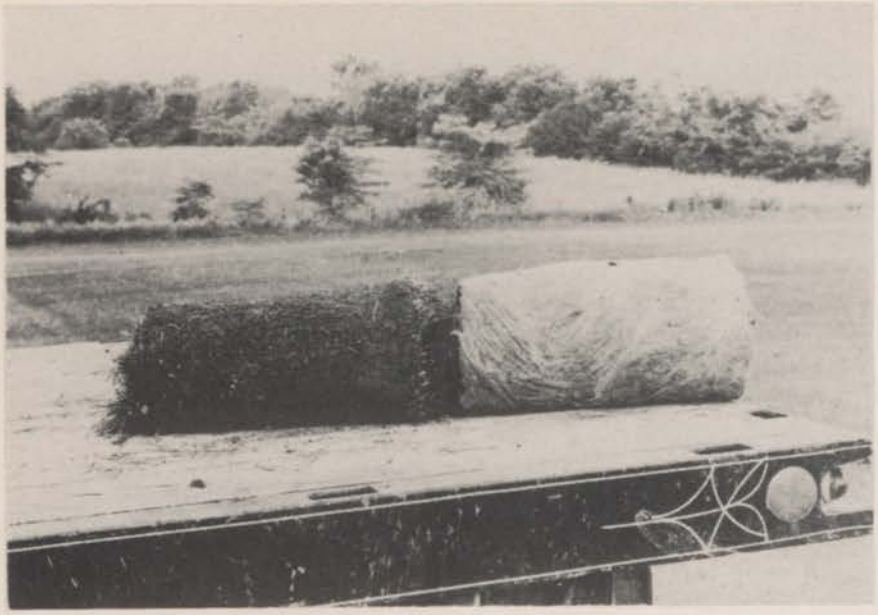
Conventional sod often takes several weeks to regenerate a new root system and hence to become knitted to the new laying surface. It must be kept moist during this period often requiring great quantities of water.

A simple method of harvesting and laying the new sod is in rolls four feet wide using a slightly modified, inexpensive, three point boom apparatus off the back of a tractor with suitable hydraulic capacity. Both the harvesting or the laying of the sod requires only two men.

Various plastic or plant fiber nettings such as those used in experiments at the University of Delaware or polyureaformaldehyde foams as used in England and in experiments by the Environmental Protection Agency in Delaware, Ohio, were found either unnecessary, too costly, or only incidental to the success of the system.

Several other advantages in the new system are readily apparent: one is that since the sterility of the

Normally, the plastic barrier is left on the soil to be used again, but here it is pulled up for demonstration purposes. The plastic can be rolled with the sod for protection during long shipments. Notice the primary rooting. This sod had been growing only about eight weeks.



Buckeye Bluegrass Farms' "Nu-Sod" on the right vs. conventional sod on the left. According to Buckeye's President Henry F. Decker, Nu-Sod is only about half as heavy as conventional sod, and will establish more quickly because of the intact root system.

growing mixture can be controlled, use of herbicides and other pesticides necessary in the production of conventional sod are reduced; another is that since its weight can be contrived, larger quantities of the new sod can be harvested, shipped, and laid at one time such that labor is reduced to a minimum; furthermore since the new sod consists of young plantlets the advantage of juvenile resistance is incorporated into the system. They young grass is relatively free of disease and as a result has more eye appeal than conventional sod.

In addition the new system makes it possible to virtually harvest the sod all year around in temperate climates. There is also some indication that using black plastic for the root impenetrable barrier may significantly lengthen the yearly growing period. In any case several crops per year per acre can be expected, whereas in conventional sodding a year or more are sometimes necessary to produce a crop which is sufficiently knitted to harvest. The advantage of producing several crops per year per acre on land which by the nature of the industry has to be close to metropolitan areas is obvious.

Studies at Ohio State University also indicate that given certain modifications, the system may also be applicable to growing other types of ground covers — such as an ivy, or **Euonymous** sod, or even one of crown vetch for roadside stabilization.

Patent protection covering the technique is pending. The intention of the developers is to license the process with supporting data and to provide assistance to anyone interested in trying it in return for a nominal fee to support additional research in grass botany. □