

# Modern Irrigation System on 850 Acres Aids Quality sod Production At Emerald Valley

**E**MERALD VALLEY Turf Nurseries, Gregory, Mich., features production of cultured sod, now the fastest growing farm product in Michigan.

Besides management and marketing methods which rank with the best in the nation, this sod farm is blessed with muck, or peat, soil with an ideal surface drainage of one foot of fall per 1000 feet.

A system of drainage ditches with dam control units are used for sub-irrigation during dry weather periods. In addition, Robert Daymon, president of Emerald Valley, has developed one of the most modern and efficient irrigation systems to be found on sod farms.

Four miles of 10-inch underground pipe carry water from 3 giant, electrically driven deep well pumps. Water is pumped over 40 miles of quick-coupling surface pipe which can pour on irrigation water at the rate of 2½ million gallons per day.

By use of this irrigation system, fertilization, and other management plus factors, Daymon, on his peat soil, can insure quick



Electrically driven deep well pump is one of 3 used at Emerald Valley Turf Nurseries. Pumps can deliver irrigation water at rate of 2½ million gallons daily. Four miles of 10-inch underground pipe is used to carry supply to quick-coupling surface pipe.

seeding starts, hasten maturity on a quality crop, lift and market the sod, and reestablish a crop each year.

Daymon's father, Leonard A. Daymon entered the nursery business in 1919. The senior Day-

mon is now retired but two sons carry on the family tradition. Leonard, Jr., owns and operates a sod farm in suburban Detroit.

Sons, Robert and Glenn, purchased 514 acres of muck land near Gregory in 1959. Glenn is now deceased and Robert C. is sole owner. Of the 514 acres only 250 was tillable when purchased. Today Emerald Valley consists of 1350 acres, 850 of which is in sod.

Day-to-day operations of Emerald Valley are supervised by Farm Manager Richard Gorrell, from a modern air conditioned office and service building. Gorrell is always in instant communications with each foreman and all major equipment by a modern 2-way radio system.

A 4-place company plane

Irrigation insures quick seeding starts and speeds maturity of sod for Daymon on his 850 acres of peat soil. Sod is lifted for market and a new crop established every year.





Robert Daymon, left, and Dick Gorrell discuss operations. Modern office and service building is in background, company plane in foreground.

stands by to insure fast transportation to and from the market centers of the midwest.

However, in deference to the time, capital and technique that has been applied at Emerald Valley Turf Nurseries, the soil itself is a major factor in this success story. Muck or peat soil is very important in quality sod production in this area.

Though the sod business started in Michigan some 45 years ago, the "muck or peat soil" at Emerald Valley had its beginning many thousands of years ago. The muck ranges in depth from 8 to 35 feet. This highly organic black soil, known as muck, is the results of thousands of years of vegetation decay. It is so organic in nature that it is constantly changing, in fact, so organic it can almost be referred to as a living thing. Once only a swamp land of stagnant water, mammoth trees and rotting foliage, it was untouched and undeveloped for many lifetimes.

The first step necessary in the development of Emerald Valley was to drain the swampland by means of canals. Once the land was dry, trees, underbrush and roots were removed and the land leveled.

A successful sod farm must, by the nature of the product, be perfectly level. Each year after harvest, Emerald Valley land is

cultivated and many tons of tree roots are worked up from deep in the soil and carted away. Levelers are then used ahead of reseeded.

An interesting side benefit or plus in working with peat soil when cultivating sod is that a square yard of sod can be produced which is lighter in weight than that grown on mineral soils. In addition, such sod is easier to cut, handle and transport. It also has the additional benefit of a healthier and faster growth when transplanted, according to Daymon.

Emerald Valley Turf Nurseries cultures only a special strain of Merion Bluegrass. Once a field of sod is removed, the land is prepared, fertilized and seeded for the coming year. The stag-

gering of seeding throughout the year insures a constant maturity of each individual plat as needed to supply demand.

Each field is mowed three times weekly during the growing season. Special engineered wide metal wheels are designed to be used on all equipment which travel on the sod fields. (See WTT, February, 1968, Page 36.) These specially designed metal wheels also roll and level the field as the grass is mowed. The absence of tracks or ruts insures an even cut with the sod is harvested.

Daily harvesting of cultured sod begins with cutting and rolling of sod in either 1 or 1½ square yard rolls. A specially designed Sod Roller (See WTT, February, 1968, Page 37) has been developed at Emerald Valley during the past 5 years. It rolls up to 2000 yards per hour.

The Daymon Sod Roller not only rolls sod at Emerald Valley but is manufactured by Daymon Manufacturing Corporation and marketed throughout the United States and Canada.

Another unique development at Emerald Valley is a re-engineered truck tractor with 18-wheel drive. This unit pulls a 1500-yard load from the muck land regardless of weather or soil condition. A specially designed side loading conveyor which rolls freely along the trail-

Daymon uses 18-wheel drive truck tractor with side loading conveyor for trailer in moving harvested sod from field.



er bed expedites loading of each 1500-yard load.

Once out of the field, the 1500-yard loads are transferred to a fleet of company owned highway trucks for immediate transportation to landscapers, nurseries and garden centers throughout Michigan, Ohio and Pennsylvania.

It is not unusual for 10,000 to 15,000 yards of "Emerald of Michigan" sod to go into any one market on a given day.

The current development of Emerald Valley and its bluegrass sod along with the Daymon Sod Roller, side conveyor loader, special 36-inch wide tractor wheels, and special truck tractor attest to the imagination and ingenuity of Daymon and his staff.

Emerald Valley has also worked very closely with county agricultural agents throughout southeastern Michigan and with the Soil and Science Department at Michigan State University.

One high point at Emerald Valley was July 12, 1967, when Daymon and his staff hosted more than 100 university department heads, county agricultural agents and commercial sod producers from throughout the United States and Canada. Occasion was a Michigan State University-sponsored 2-day event at nearby Lansing, the better part of one day being spent at Emerald Valley.

### New Brushkiller Available For Spraymen

Diamond Shamrock Chemical Co., has developed a new brush control preparation, Diamond Special Brush and Weed Killer No. 345. A wettable powder, it contains non-volatile 2,4-D, DSMA (Disodium Methanearsonate) and a surfactant or wetting agent.

Diamond says it will control and suppress growth of many

weeds, grasses and brush normally controlled by either 2,4-D or DSMA plus surfactant. These include blackjack oak, bracken fern, brambles, chestnut oak, chokecherry, hazel, pine, pin oak, poplar, red oak, sumac, white oak, willow, and yellow birch.

For application, the powder is mixed with water (25 pounds per 100 gallons) and agitated continuously during preparation and application. The prepared liquid is applied as a drenching spray at a rate of 100 to 300 gallons per acre, depending on brush density.

The company suggests use of the new material on railroad and utility rights of way, roadsides, riverbanks, farm fence rows, and similar non-crop areas. Availability of the new product should help with the shortage of brush control agents brought about by government purchase of almost all 2,4,5-T produced in the U.S.A.



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