Cool Season Production

From two nuclei, Illinois and New Jersey, cultivation of cool season sod production spread in the 60's. Michigan, Indiana, Minnesota, Wisconsin, and Ohio sod industries grew in number of firms and competitiveness. The midwestern boom spread westward to Missouri, Kansas, Colorado, Nebraska and California in the late 60's.

From New Jersey, growth spread quickly to Maryland, Virginia and Pennsylvania and northward to New York and Connecticut. By the early 70's, cool season cultivated sod production was clearly established and busy providing the needs of a boom in housing and industrial building. Competitiveness kept prices down forcing growers to work toward volume for profit. Mechanization clearly separated the men from the boys and later helped stabilize the market to its current position.

Like the stripping crews in seed production, the pasture sod business faded as newer technology took over. Sod nurseries grew in size and began offering a variety of turfgrasses. Seed companies and extension turf specialists saw the potential of the market and began providing special attention to sod production. Michigan, under pressure from the Sod Growers of Michigan and the Michigan Turfgrass Foundation, legislated a special turf fund for research. Turf specialists now had at least part of their work time designated for sod production service. Sod was a separate power from golf but served to supplement the turf cause in turf research from a public funding standpoint. Older research programs such as Pennsylvania, Ohio, New Jersey, Virginia, Maryland, Michigan, Illinois, and Nebraska found new support and grew as a result. The second generation turf researcher was studying during a boom period for turf. Some of them moved from older institutions to newer programs such as California, Colorado, Oklahoma and Texas and broadened turf research there.

It was the sod producer that really spread the word about improved turfgrasses. The obvious difference of a lawn sodded with an improved turfgrass next to one sodded or

Ben Warren and assistant *in turf greenhouse evaluating turfgrass selections.*

PROFILE

Pine Island Turf Nursery

The sod industry grew rapidly in the 60's. An example of a firm who entered the business in the mid-60's is Charles Lain, owner of Pine Island Turf Nursery in New York.

Lain left his job with Weyerhaeuser in 1964 and started a sod nursery in 1964. In 1966, he stepped out on his own. He served as president of the American Sod Producers Association in 1979 and today manages a 435 acre business with sales of more than $500,000.

Lain's nursery is located in New York's largest sod growing region. The area has more than 3,000 acres of sod production on its black, mucky soil. Lain competes with Warren's Turf Nursery in the same area and other growers serving the New York City area including DeLalio and McGovern sod farms in Long Island.

The Pine Island area is among the richest in terms of soil fertility in the country, with vast onion, lettuce and celery production. The soil is acidic and contains a fair amount of aluminum and iron. "Chemicals that work on upland soil don't always work on muck soils," says Lain. In the fall, he applies 600 lbs/acre of 10-30-20 and three tons of lime per acre. He feeds again in late October with 300 lbs. of 20-5-5 and finally the next spring with 350 lbs./acre of 45 percent urea. Based on soil tests, he adds copper and adjusts the phosphate. He supplements the area's 25 inches of rainfall with irrigation.

Lain used Ryan sod cutters until 1974 when he bought his first Brouwer harvester. "The harvester has allowed us to get more production per acre by reducing loss between five and ten percent," says Lain. "It also allows us to harvest more tender, younger sod."

"It used to take 12 workers six hours to harvest one acre of sod using the sod cutter. Today, we harvest an acre in less than four hours with three to four workers," Lain boasts. The harvester enabled Lain to reduce peak season labor by eight persons.

Lain grows a blend of Adelphi, and two of three other improved Kentucky bluegrasses, Touchdown, Majestic and Glade. For shady areas, Lain sells a mixture of Warren's A-34, Glade, and Fortress and Jamestown fescues.

"Sod is plagued much more by weeds than disease," says Lain. After harvesting he applies Roundup to eliminate weeds such as Quackgrass. Crabgrass, foxtail, barnyardgrass, and other weeds are controlled by spring and fall applications of Banvel-D and 2-4,D and two applications of D.S.M.A.

In 1977, Lain lost nearly a third of his mature sod to leaf spot after a very wet spring. Lain indicated fungicide treatments are not required as often in his area as in others.

Marketing is a firm commitment to Lain. He spends nearly ten percent of his sales on billboards, newspaper advertising, brochures and radio messages. Sales have increased by nearly 20 percent per year since 1976. Eighty percent of his sales are to landscape contractors, 15 percent to garden centers, and five percent retail. He often provides retail customers with maintenance information to help assure the sod of proper care and Lain of a satisfied customer. *Story and interview by Carol Rose.*

seeded with common Kentucky bluegrass made the public take notice of improved turfgrasses. The demand upon garden centers and landscape contractors for improved turfgrasses grew. Landscape architects starting specifying the improved Kentucky bluegrasses.

Today, the number of new turfgrass cultivars is clouding the issue of what type of sod to produce. Sod producers must anticipate demand 18 months ahead of time. They know they have good demand for certain solid performers. Their willingness to devote much acreage to a steady stream of improved grasses is limited to the sales advantage of switching from one to another. So, their acceptance is slow

Gerry Brouwer
Ontario sod producer and equipment maker who helped spur the industry on with his side tracking sod harvester.

and cautious. Each time they add a new turfgrass they also accept the need to educate customers of the advantage of it. The fact that landscape contractors and architects are better voiced on improved turfgrasses does speed up the educational process. Therefore, seed growers have a larger educational job to do.

The number of sod producers has stabilized in the last five years. Acreages increase to meet rising demand. The market appears just as solid as Ben Warren found it in the late 30's, and some conglomerates are acquiring sod nurseries. Two examples are Cal Turf's acqisition by American Garden Products and its takeover by Amfac of Honolulu, a large agribusiness corporation, and the purchase of Southern Turf Nur-

series of Tifton, Georgia, by Atlanta-based Tech Industries.

As of July, no drastic fall-off had occurred in the demand for sod this fall, despite gloomy building start figures. Sod will again show its relative remoteness to economic conditions. Commercial lawn care has heightened the interest in lawns by homeowners. As homeowners are forced to restrict travel plans, their homes and their lawns become their prize possessions. Unfortunately, sod producers, irritated by an Illinois law which essentially permits a lawn care firm to apply just water during a job, have formed a poor attitude about all lawn applicators. When sod producers could be working with lawn care firms to resod old lawns, they instead are reluctant to recommend a lawn care service to their customers. The care provided by the lawn applicator or the landscape contractor is the best insurance against failure of the sod after installation. Furthermore, these firms could recommend sodding for lawns they see as beyond hope or not up to current turfgrass standards. If a person pays $2,000 to sod his property, he will be willing to pay the $200 per year to take care of it.

Lawn renovation becomes an important factor when building declines. The sod industry should deal with this marketing alternative.

Market Size

Value of sod produced in the U.S. approximates $200 million annually. Seventy percent of this total is cool season sod production. Sod producers harvest between a third to a half of their acreage each year. Total acreage in sod production is estimated at more than 100,000 acres.

By far the most common time for seeding is late August. Some growers may harvest the sod the following summer if they have used netting or pushed the sod through fertilization. This is done only in special cases and usually less than ten percent of the acreage is devoted to accelerated production. If a grower chooses, he will plant a portion of his acreage in the spring, again usually for specific orders. The normal growing cycle remains 12 to 18 months, fall to fall or fall to spring a year later. Whereas monostands of Merion or other Kentucky bluegrass were common in the early 60's, a blend of improved Kentucky bluegrasses is common today. In some cases, creeping red fescues are added for shade and less fertile sites. Research by Dr. Richard Hurley under Dr. Richard Skogley at Rhode Island found ten percent as the optimum percentage of red fescue in a sod mixture.

Although netting could conceivably allow production of perennial ryegrass sods, growers have avoided such production so far. They are sold on the superior sod strength of bluegrass sod and question the winter hardiness of improved perennial ryegrasses for sod. NK-200 has proven cold tolerant in Minnesota, but more research is needed.

In the transition zone, tall fescue is included in many sod mixtures. New fine-bladed tall fescues show promise for this area and perhaps north ern areas once winter hardiness is established.

Zoysiagrass and bermudagrass are available as plugs or sod in the transition zone. Some Virginia sod nurseries produce bermuda and zoysia sod. Much of the original work with zoysia took place at the USDA Research Center in Beltsville, MD.