

Zoysia—A Turf for Transition Zone Fairways

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When Jonathan Swift wrote, "Whoever could make . . . two blades of grass to grow upon a spot of ground where only one grew before would deserve better of mankind," he must have been thinking of the golf course superintendents of a transition zone; especially those superintendents who work in the mid-continent on a line between Cincinnati, Louisville, St. Louis, Kansas City and Wichita. It is in this transition zone that the survival of fairway grasses make a superintendent and his club.

A brief history tells us combinations of bluegrass, fescue, rye and bentgrass had been the standard turfgrasses for this area. The combination of bluegrass and fescue was by far the most superior mixture of grass to work with until fairway watering came along. Mis-management of water and the demand for a short height of cut of these grasses limited their longevity.

Today, new improved bluegrass strains, such as Pennstar, Sodco, Prato, Windsor, Fylking and Warren's A-20 may enlighten the bluegrass picture in the future; only time will tell.

Bentgrass had had little success until the last few years when Louis Miller, of the Louisville Country Club, began showing his membership they could have excellent bentgrass fairways. Lou's programs of water management and feeding practices, and the development of a very strong fungicide program, have given his membership the bentgrasses they wanted.

U-3 bermuda was introduced a dozen years ago and it seemed to have the desirable qualities. However, after six or eight years, U-3

began dying. Fairways that had been solid bermuda are now sparse. What happened? Insufficient aeration during the summer? Excessive thatch buildup? Height of cut? Drainage? Marginal potash levels? Winterkill? Whatever the cause, bermudagrass, whether it be native, U-3, or hulled, is being used very conservatively.

Zoysia, on the other hand, is becoming the number one turf, although it is not new to the transition zone. In the early 1950's, Ernie Schneider began introducing zoysia into his fairways while he was superintendent of Evansville Country Club in Evansville, Ind. Today, the present superintendent, Edward Boyd, reports acres of zoysia throughout the course.

Why has it taken so long for zoysia to catch on? The principle reason was one of introduction. Zoysia is a very slow growing turf that can only be planted vegetatively into established fairways by sprigging, plugging, strip-sodding, or solid sodding; on a clean area, hydro-stolonizing can be done. Zoysia cannot be introduced by seed in the transition zone as it can be in the South.

Meyer Zoysia has been the most promising zoysia to work with in the transition zone. Midwest Zoysia, released by Purdue University, has not shown the promise it was selected for in this region. Midwest, although darker in color than Meyer, has longer internodes and spreads twice as fast as the Meyer strain. However, it has too wide a leaf surface to stand up under golfing requirements for fairways. Meyer is a slow grower, but it has the following assets:

Figure 1. Hydro-stolonizing Method.



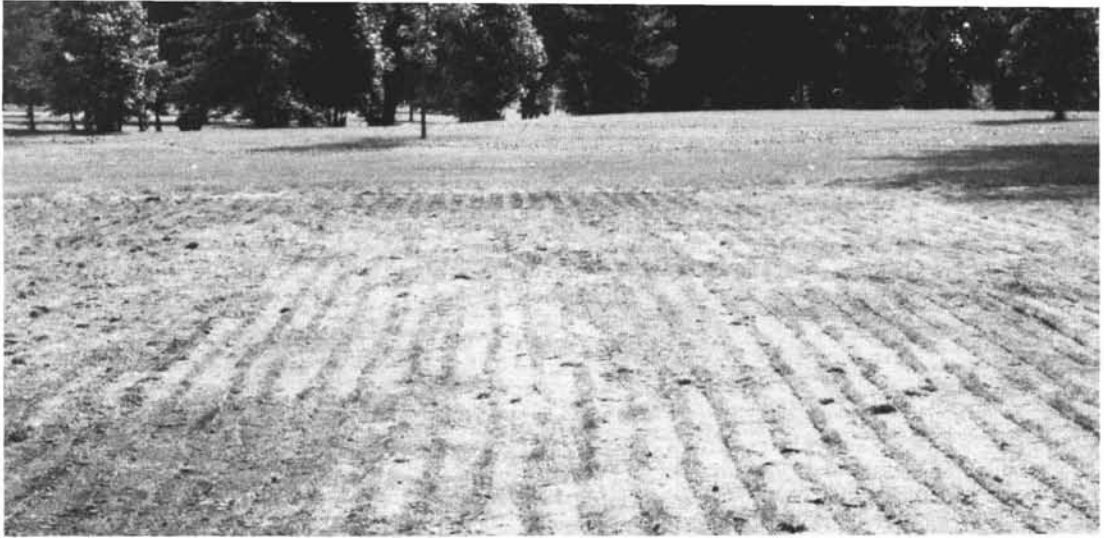


Figure 2. Strip sodding at four-inch intervals.

1. It resists crabgrass and other summer weeds.
2. It thrives during the heat of summer.
3. It grows on almost any kind of soil.
4. It is very drought tolerant and needs less irrigation than most turfgrasses.
5. It is easy to mow when cut regularly.
6. It needs mowing less often than most turfgrasses.
7. It can be mowed at heights from one-half inch to one inch without loss of vigor and beauty.
8. It produces a firm, resilient cushion of turf.
9. It is very resistant to wear.
10. It has good texture and color during the growing season.

Meyer, as well as any other zoysia, has its disadvantages too. For instance, it loses its green color in late fall after the first few killing frosts. It does, however, green up much faster in the spring than any other warm season grass. Dormant zoysia will let winter weeds invade, but this is not a serious problem with a good herbicide program. Zoysia is more shade tolerant than bermudagrass, but it will become weak in shaded areas. For this reason, a bluegrass-zoysia combination has worked very successfully at many courses. Bluegrass is overseeded in the fall along tree line fairways where sunlight is limited.

Strip-sodding and plugging have been the two primary methods of introducing zoysia into fairways. Solid sodding has been carried out extensively on many collars, but is not advocated for complete fairway areas due to the economics involved. The hydro-stolonizing method (Figure 1) was carried out at two golf courses in the St. Louis area during 1970. One course has been very successful with this program; plowing up six acres of fairways and

hydro-stolonizing five bushels of stolons per 1,000 square feet. Hydro-stolonizing fairways is new in this area, and anyone wishing to venture into this program is a pioneer.

Strip-sodding at 4-inch intervals (Figure 2) has been very successful in the Kansas City area. Paul Beer at the Indian Hills Country Club, Prairie Village, Kans., has been strip-sodding fairways for years. His endeavors have been very rewarding, not only for himself, but also for his membership. Complete coverage has occurred within 18 months with this type of sodding.

Plugging by hand or by mechanical means may have been done by more superintendents than any other method. Tom Sams, of the Audubon Country Club, Louisville, Ky., plugged 15 fairways during 1970 at an approximate cost of \$50,000. Peter Hitch, of the Meadowbrook Country Club, Ballwin, Mo., and Carl Beer, have been planting fairways to zoysia by plugging for the past several years with great success. All these superintendents have been using Meyer Zoysia.

It is true that the zoysia program is a slow program. The fact remains, though, that zoysia is the most winter hardy turf of the warm season grasses and has survived the long, cold winters of the transition zone. Disease has not been a problem and insect activity to date has been minimal. Thatch is not of concern, nor should it become so; there is available mechanical equipment to take care of this problem.

Meyer Zoysia makes an excellent fairway turf, or it wouldn't have been suggested and encouraged in the very difficult transition zone of the United States. Not many years ago, yarrow was seeded in fairways in the St. Louis area for turf cover. Yarrow, a weed, couldn't do the job. Zoysia can; try it and see!