

GRAU'S ANSWERS TO TURF QUESTIONS

Zoysia for Golf Turf

What is the role of zoysiagrass for golf turf? This discussion is intended as an impartial evaluation of zoysia in an attempt to weigh both the strong points and the weak ones. At the outset, the reader should be aware that this writer has been deeply impressed by the performance of zoysia since he first saw plots of the grass in 1931 at the Arlington Turf Gardens (now Pentagon parking and access roads). His admiration of the grass has grown steadily through the years.

Zoysia is native to the Philippines and the Orient where summers are very hot and the winters often bitterly cold. It is a grass that has existed under conditions of limited and erratic rainfall and extremely low soil fertility. In the home of zoysia all manures and fertilizers must go to produce food for people. Plant explorers collected seeds of the grass and brought them back to the U. S. around 1900. The late W. J. Morse of U.S.D.A. and soybean fame hired nearly naked natives to hand-strip the ripe seed. Frank N. Meyer, another U.S.D.A. plant explorer who lost his life in China in 1918, has been honored for his part in introducing zoysia by having Z-52, now Meyer, named for him.

Until fairly recently, zoysia has been considered largely a botanical curiosity with little practical application. Just prior to World War II some selections were made from a mixed seedling population. One of these seedlings was designated Z-52 (the 52nd selection) It is now the best-known strain of all-Meyer zoysia.

Seed Harvested

When the U.S.D.A. moved to Beltsville in 1941-42, some 50 or 60 selections of zoysia came along and were planted in plots four ft. square. In 1945 when the turf research program at Beltsville was given active support, the No. 1 project was evaluation of the 150-odd bluegrasses.



If you have questions about turf care, please send them to Fred Grau (right) c/o Golfdom.

Out of this study came Merion. The No. 2 project was zoysia. In 1946 it was found that zoysia seed could be harvested. For the next seven years the potentialities of zoysia from seed got much attention.

Seed yields from small plots of selected strains were calculated to run as high as 1800 lbs. per acre. The Z-73 strain, a seedling grown from pure Z-52 parent stock, was highest yielding. Z-73 seed has produced outstanding turf at several sites.

At Beltsville the 4 x 4 plots of zoysia were located adjacent to a hard packed earth service road (silt loam soil). From 1941 to 1945 one strain spread across both lanes of the constantly traveled road. This was without benefit of fertilizer or irrigation! Another revelation was that crabgrass couldn't invade zoysia turf. When zoysia was planted directly into solid crab, the latter always lost the struggle. Goosegrass (crowfoot or silver crab) also lost out to zoysia.

Plantings Stepped Up

In 1951 and 1952 "Operation Zoysia" was executed jointly by U.S.D.A., USGA green section and Mid-Atlantic GCSA in cooperation with the late Bill Glover at Fairfax CC. Later this project was extended nationwide. Plantings were made under existing, non-irrigated conditions into weedy fairway turf with no special attention being given to the grass. In fact, it was purposely neglected. In spite of this, the zoysia continued to spread and produce weed-free turf and provide ideal shot making turf.

It is impossible to mention everyone who is working with zoysia on courses. Here are a few who consider this grass in a highly favorable light for golf turf: James E. Thomas, Army Navy CC, Arlington, Va. (fairways); Bob Shields, Woodmont, CC, Rockville, Md. (fairways); John McCoy, Cincinnati CC (fairways, tees); Taylor Boyd, Camargo, Cincinnati (lawn areas); Don Likes, Hyde Park, Cincinnati (fairways); Chet Mendenhall, Mission Hills, CC, Kansas City (tees); and Frank Dinelli, Northmoor CC Chicago (tees).

In Miami, Fla., a few years ago we got pictures of perfect feed-free zoysia fairway turf growing in white sand. Last fall at Keokuk, Ia., and Quincy, Ill., the best tee turf we saw was zoysia. Other examples could be cited endlessly.

Some Don't Like It

Some supts. have tried zoysia and haven't liked it. Quite frankly, some of the worst turf we have seen has been zoysia — due to improper management. The worst zoysia turf for golf is that which hasn't been cut short enough nor often enough. The grass can't be blamed under the circumstances.

It must be borne in mind that zoysia will grow wherever crabgrass thrives. Zoysia is most "at home" in the "transition zone" where fescue and bluegrass do poorly because of prolonged summer heat. In Bermuda regions zoysia has a real function in providing high quality turf under soil fertility levels so low that Bermuda constantly is overrun with crabgrass and crowfoot.

Our Q & A often must deal with the very practical consideration of making recommendations for growing quality fairway turf in the "Twilight Zone" under soil poverty conditions. Common zoysia seed is recommended because of good performance and economy of establishment and maintenance. It is known that zoysia turf from seed remains singularly free from mat and thatch. Cool season grasses invade it easily to provide green color in late winter and spring.

Shots Not Made From Color

Perhaps the greatest objection voiced against zoysia has been, "I don't like its straw color in the winter". Significantly, most of the objections have not come from the golfers. We have yet to find any grass that provides as many days of perfect weed-free, shotmaking turf as zoysia. Shots aren't made from color—they are made from dense, firm closecut turf. Zoy-



At the conclusion of his South American tour last month, Dwight D. Eisenhower, the Burning Tree CC traveler, slipped into Puerto Rico to play Dorado Beach GC. He's shown on the way to an 87, chipping onto the 9th green.

sia provides the best color with minimum irrigation during the heaviest season.

Zoysia usually turns green in spring two to four weeks earlier than Bermuda. Color holds somewhat later in the fall. Excellent turf is produced with both grasses but Zoysia will thrive on about half the nitrogen that Bermuda demands. Zoysia will invade traps and putting greens. It invades more slowly than Bermuda and is easier to control. Zoysia heals scars and divots more slowly than Bermuda but it will respond very well to extra nitrogen.

Some early attempts to grow zoysia turf from seed met with failure. Part of it came from lack of understanding, part from lack of patience. Poor techniques had much to do with the poor results. Chances for success are infinitely greater today.

Zoysia turf from seed is not necessarily superior to turf from improved strains or other types of vegetative increase. Fairfax Country Club has some excellent Zoysia matrella fairways. The disadvantage of this strain is its cost of establishment, limited climatic range and susceptibility to cold. In Japan most greens are zoysia.

This Q & A dept. welcomes letters from supts. who are using zoysia successfully for golf turf. It would be extremely helpful also to receive information on management factors that help to create satisfactory zoysia golf turf. Just as helpful will be letters describing failures and disappointments, and the reasons.

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