

# TURFCOMMS



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**PURPOSE:** To pass on what we learn willingly and happily to others in the profession so as to improve turf conditions around the country.

ICE SHEET SEVERELY DAMAGES ZOYSIA  
IN GREATER KANSAS CITY

or would you prefer

ZOYSIA ESCAPES DAMAGE FROM 45 DAY ICE SHEET

There is truth in both of the above headlines. This loss can serve as an educational tool for all of us. The ice sheet was a main contributing cause of wide spread zoysia loss in the Kansas City area this last winter. Yet, "healthy" zoysia survived 45 or more days under a 2 inch ice sheet unscathed in some cases. WHY?

"Healthy" zoysia appears to have been zoysia free of thatch, thus newly established. The "healthy" zoysia was located in full sun on a south or west facing slope. If the ground was not sloping it had to have good internal drainage. The "healthy" zoysia had not been treated with balan each and every year for the last five or more. The zoysia that survived was free from winter traffic after the ice sheet melted or perhaps just as critically for the weeks just before ice sheet came.

Four Greater Kansas City golf courses with Meyer zoysia fairways were examined closely on April 24 and 25. Another course was examined briefly and at two others brief discus-

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sions were had with the superintendents. The purpose was to determine the cause or causes of the wide spread loss of zoysia on the fairways of these golf courses. We (the superintendents and I) also desired to find ways to prevent future losses.

An ice sheet was present on all affected courses for 45 to 60 days starting Thanksgiving Day of 1985. This ice sheet in combination with other factors was the cause of the wide spread loss of zoysia. The other factors were shade, poor drainage, cart traffic, long term use of Balan (benefin), northern exposure, and thatch. It appeared that the ice sheet itself even when down for 45 days was not sufficiently damaging to kill Meyer zoysia. However, only turf newly established (less than 2 years of complete coverage) from sprigs or strips of sod came thru in good to excellent condition. These areas came thru the winter in good condition only where none of the above mentioned other factors were present.

Shade, northern exposure and poor drainage were conditions present on all of the courses. Shade and northern exposure locations result in weaker zoysia because it goes into the winter with less stored food due to less sunlight received. During the winter turf in such locations stays colder, receives less sunlight and retains ice longer, thus that turf is more prone to winter kill every year. Winter kill in bermudagrass exhibits similar patterns. Poor drainage often contributes to winter kill of both grasses. Zoysia does not tolerate wet "feet" during cold winters.

Cart traffic was felt to be a definite contributing factor based on two types of observations. The most heavily played courses suffered the most damage. There were several places where fairway traps pinch in the fairway or some other factor concentrated traffic, in these areas zoysia kill was more complete than on similar areas where traffic was more widely spread out.

Thatch was a less consistent factor than some of the others. It often was more prevalent on areas that had been killed, but which did not appear to have one of the other factors involved. Also, it was often present where the kill seemed more complete than the other factors explained. The clearest example of it's contribution to weakening the turf was on the course examined only briefly. There, on one newly established fairway were two large patches of zoysia established many years previous. These two patches had both

survived but, were much less vigorous than the newer established zoysia.

Balan (benefin) a preemerge often used to control crabgrass and goosegrass had been felt to be a problem last year on one of the courses. Zoysia was not performing as desired at this course. This course and another that had been using Balan for 5 or more years came thru this winter in poorer condition than the others. On both of these courses there were weak or dead zoysia areas that were hard to explain using any or all of the other above factors.

Balan has been reported by turf researchers to be injurious to both zoysia and bermudagrass. More specifically it has been shown to reduce the winter hardiness of one to the bermudagrass cultivars.

After greenup a hard frost with temperatures reported as low as 22 degrees in the early morning of April 22, set back the recovering zoysia and thus further contributed to the severity of the kill.

#### PREVENTION OF FUTURE LOSSES

It was suggested that an effort should be made to remove carts from the fairways for the months of January thru May every year. This is a good idea on all bermuda and zoysia fairways. Spring traffic is often "the straw that breaks the camel's back" after a severe winter. Allow the carts back onto fairways in early May when warm season grasses (bermuda and zoysia) come thru winter in good condition. Wait until the end of May to let carts back on fairways in bad years.

In the future for those greens or fairways where ice or snow accumulations are a problem try the following. But 2 cups of powdered graphite in 3 gallons of water. Shake well and spray on with a backpack sprayer. This should adequately blacken 5000 square feet to get faster ice or snow melt if any sunlight gets thru at all. The beauty of this approach is that you will have no problem getting this material to stick to very smooth icy crusts. Try ordering the powdered graphite from your local metal foundry or his supplier.

It would probably be difficult to spray this on the whole course. However, it's use on areas where other factors might be weakening the warm season grasses is worth

considering.

Where shade is a factor consider moving the edge of the fairway away from the trees on the south and/or west side.

Use some preemerge other than Balan. One of the least damaged courses had used a Ronstar-Betasan combination for the previous two years. Another had used just Betasan. The former is preferred, if goosegrass is a problem.

Keep thatch under control with aerification. I suggested aerify one time a year. On zoysia this should be in late June or July. For bermudagrass I prefer August. When you aerify make 3 or more passes with the fairway aerifier; drag a chainlink fence or some other device to assist in breaking up the cores. Do not pick up the cores.

By letting the soil from the cores work back into the turf you will greatly assist thatch decomposition. A vigorous aerification helps to keep your turf young. Yes, it also increases the summer annual weed problems or winter annual weed problems if done too late. Therefore, be prepared to fight these problems. A second application of preemerge at 1/2 rate or an application of one of the methyl arsonate postemerge crabgrass herbicides 10 days after aerification to kill seedling crabgrass may be necessary.

Put in drains where needed. This is not the first year nor will it be the last in which warm season grasses are lost in poorly drained areas.

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Note about editor: With an eye toward supplemental winter employment he took courses in science teaching, constitutional law, and American history. Then this spring taught evening adult education courses in home landscape design and lawn care and learned more useful information teaching the last course than taking the three above.

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DEAR TURF EXPERT;

Would you be so kind as to please tell me which end of a grass seed goes up? My spouse says it doesn't make any difference. Yet insisted I was to plant the tulips and daffodils with the point up. Why not the grass seed?

Signed: Confused Gardener\*

\* A modification of The Lawn Institute's material.