Q&A Topdressing with beach sand—too much salt?

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Have Questions?

SEND THEM TO GRADY AT: P.O. BOX 110670, UNIVERSITY OF FLORIDA, GAINESVILLE, FL 32611,GLMI@UFL.EDU

I was assigned the field maintenance duty for about 10 acres of football and baseball fields when our department was cutting back and never replaced our retiring field maintenance man.

My department does not have much of a budget but I do fertilize four times a year and apply pre-emergence herbicides in spring and fall, but after that I really do not have much more money left. In regard to topdressing, I do have an unlimited amount of beach sand. One of our passive beach parks is on the gulf and we have to dredge the boat canal two or three times a year and the sand is just stockpiled back onto the shore where it eventually returns to the ocean. I have the equipment to get this sand and labor to spread it but I am worried that it being in the saltwater might have some adverse effect on my bermudagrass because of the salt.

Is this okay to try or could this be detrimental? If this is out I also have access to "dirt" that has been shaved off the right-of-ways of the highways. It has a lot of weeds and bahiagrass in it but it is dirt. Would it just bring unwanted weeds into my playing fields?

Coach Roddenberry,

Wakulla County Parks and Recreation Dept

Well Coach, your questions were great and I appreciate your problem solving ingenuity. You have obviously done a good job training yourself to recognize potential problems and realizing the need to use the people and material resources available to you.

Topdressing is an important part of maintaining high quality bermudagrass fields and the choice of material can have a lasting impact on how the fields perform. If you put down an "inferior" product, it can cause problems for a long time.

If the beach sand has been stockpiled for a while and been leached to remove excess sodium and it is not too fine to cause drainage and compaction problems later, I don't see why it can not be used on bermudagrass. At the least I would suggest you test it for pH and EC prior to using it. Salinity values you would want to look for would be denoted as an EC from 2 to 3 dS/m using a saturated soil-water paste extract method or a Total Dissolved Salt concentration of 1,280 to 1,920. If those numbers doubled (for a sand) you would probably still be ok to use it if you irrigated following application. If the values are more than double those numbers I would not use the material. The pH should be no higher than your base soil, which is hopefully below 7.0.

As you remove sand from the pile, realize that the salinity may increase as you move further down into the pile since the salt is being leached down through the pile. My suggestion would be to take some pvc cores deep into the pile and section into various depths. Testing these samples for pH and salinity would be a great science project for a local high school class or individual.

As a final assurance, before you topdress your entire field with the sand, you may want to try a small area on a sideline location as a test plot. I would irrigate the sand after applying. To be honest, if the sand piles have received an inch or two of rainfall, I do not think you will have a problem using it, especially if you water it in. The one exception may be the very bottom of the pile if the soil underneath where it was stockpiled did not allow rapid infiltration and salts accumulated.

With normal rainfall and the ability for supplemental irrigation, I do not think the greatest concern should be the salt. The sand particle size has the greatest potential to cause long-term problems. You may want to have a sieve test done by a local lab or a University lab to determine particle sizes. Under most circumstances, you want the topdressing material to have particle sizes similar to the field's profile or perhaps a little coarser.

I would not use right-of-way dirt. You are just asking for trouble with weeds and fine clay materials that tend to settle on the roadsides.