



DEPARTMENT OF
Soil Science

UNIVERSITY OF WISCONSIN-MADISON

To: IGCSA Members
From: Doug Soldat
Date: October 15, 2018
Subject: Potassium content in sands used in and around Idaho for topdressing.

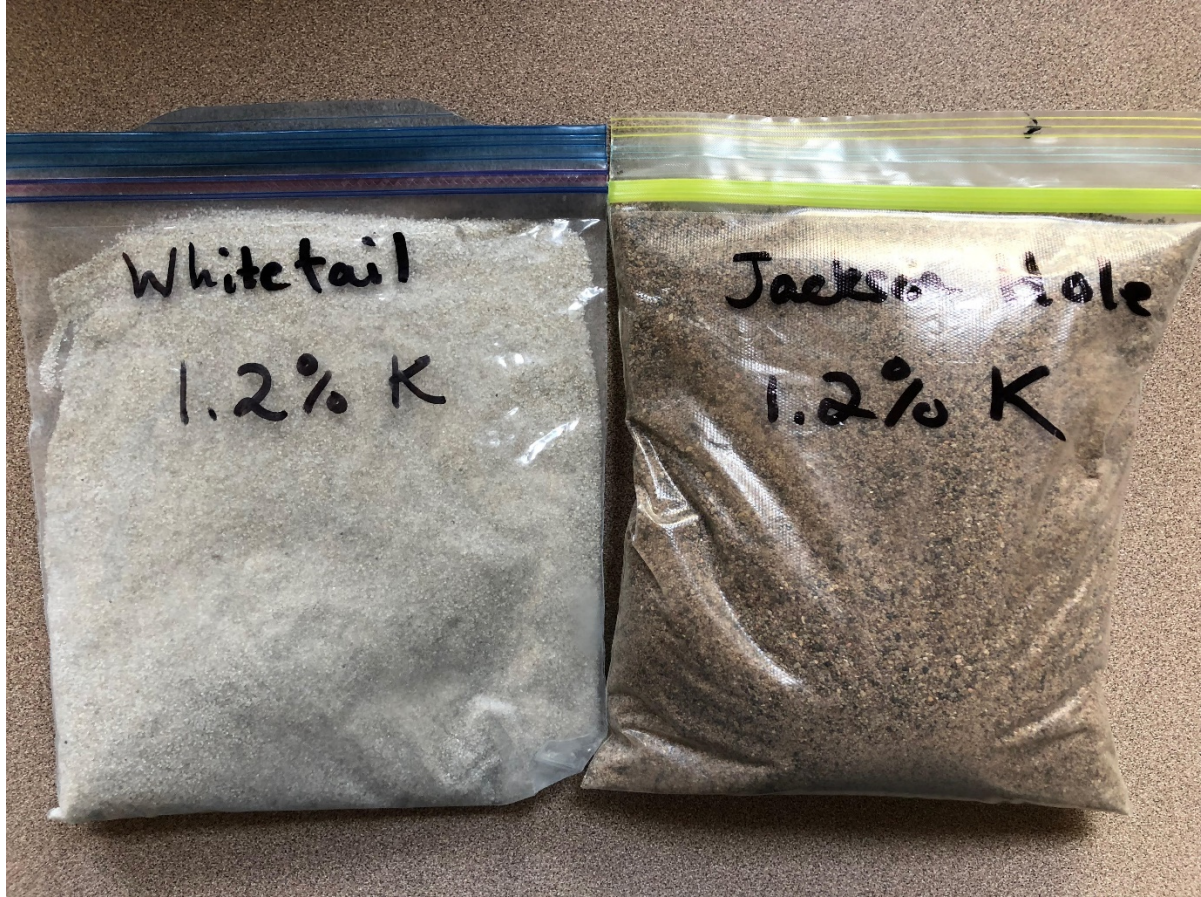
Thank you very much for hosting me and attending the McCall Meeting earlier this month. During one of my presentations, I shared the results of the research we are doing on potassium requirements of bentgrass. In our field plots, we have determined that our bentgrass gets all the potassium it needs from the potassium-bearing minerals in the sand topdressing (potassium feldspar being the most common). Adding potassium fertilizer did not improve the performance of the turf, and actually exacerbated snow mold damage. Our root zone and topdressing sand is quartz-dominated, but has small amounts of potassium-bearing minerals that appear to be enough to grow high quality bentgrass in Wisconsin.

After my talk, I was given a sample of a very white colored topdressing sand from Whitetail Golf Club in McCall (Unimin BB 202). My initial impression was that the white sand did not have any potassium in it, because potassium minerals tend to be pink or darkly colored. I also received a sample in the mail from Jackson Hole Golf and Tennis Club that had a brownish hue (sourced from outside Afton, WY), and from that I suspected it contained appreciable potassium. It turned out that both of these sands tested at 1.2% total potassium. This is double the amount of total potassium of the topdressing sand I use in my research (0.6% potassium). I have not yet conducted mineralogy tests of these sands, but I do know that there is at least one white colored potassium mineral (albite). These results suggest that these two sands may be able to provide enough potassium for bentgrass without the need for supplementary additions of potassium fertilizer. We are continuing to study the potassium release from different sands, and by no means am I ready to definitively state that any sand with more than 0.6% potassium will be able to provide enough potassium for the plant. However, it is a good starting point for a hypothesis. All I know for sure is that the two local sands do contain appreciably more total potassium than my sand source in Wisconsin.

I look forward to providing future updates as we continue to research this topic. Do not hesitate to reach out by email (djsoldat@wisc.edu) or phone (cell: 608-469-0378) with questions or to discuss the implications of these findings. If you have a sand sample you want tested, send a quart sized zip lock bag to me at:

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Whitetail

1.2% K

Jackson Hole

1.2% K