

# 'Tighty whities'

## Soil health test



### What are we measuring?

Soil microbes get energy by feeding on carbon compounds from plants, such as sugars that leak out of plant roots and cellulose that makes-up plant tissues. Microbes eat more food when they are larger in size. Therefore, the speed of decay is a measure of the size of the soil microbe population.

Why underwear? Cotton briefs ("tighty whities") are a good stand-in as microbe food for several reasons. Obviously, each pair is identical and stains easily. Also, they are chemically similar to carbon-rich material from crops: the cellulose content of cotton briefs is 90%, compared to 80% cellulose in corn stalks.



Who are we? The idea comes from Anthony Bly and Sara Berg of South Dakota State University Extension: <http://onpasture.com/2016/11/21/tighty-whities-can-tell-you-about-your-soil-health/>. Thanks to NCR SARE, GrassWorks, Inc, and Wisconsin RC&D's for supporting the Sharing Soil Health Knowledge and Practice through Grazing Networks project.

### Instructions

- Identify separate fields with different management to test (i.e. overgrazed pasture and rotationally grazed pasture). Describe the fields and their management for future reference:  
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- Gather your underwear and a shovel. The dry, clean, briefs provided weigh 65 g, although you should weigh the underwear first if you are using your own: \_\_\_\_\_
- Locate a representative spot in each field to bury the underwear. Bury one brief in each field with waistlines showing aboveground. Disturb plants as little as possible. Make a map of the fields on the back of this sheet and mark the spots for future reference.
- Mark your calendar to dig up the briefs in 5 to 8 weeks. Write today's date: \_\_\_\_\_
- Wait 5 to 8 weeks to dig up the briefs. Write today's date: \_\_\_\_\_
- Gather a shovel and label containers for each buried brief. Unearth the briefs and gather any detached pieces. Clean the briefs: remove dirt, hand wash, and air dry. Record weights in grams:  
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- Send a copy of this sheet (and maybe a photo with your briefs) to Kirsten Jurcek, Glacierland RC&D, N2437 Brattset Lane, Jefferson, WI 53549, [kjurcek1@centurytel.net](mailto:kjurcek1@centurytel.net), or call (920) 342-9504.