

## Soil Your Undies for Soil Health

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There are more living organisms in one tablespoon of soil than there are humans living on the earth. We've all heard this, but how do we know? How could we visualize this? Maybe we could give them an underwear sized plate of food and see how much they can eat in 6 weeks. Also, we know that not all soils are created equal, so let's try a few different soil management systems and see what happens.

This was the hypothesis when Neil Sass of the Waverly Soil Survey Office, buried 6 pairs of Fruit of the Loom 100% cotton "tighty-whiteys" on September 26<sup>th</sup>, 2015 in Northeast Iowa.

- They were buried horizontally, approximately 2 inches deep with the elastic band sticking out.
- They were all buried within a quarter mile of each other in Fayette or Downs soil types.
- The different management systems tried were:
  - No-till soybean
  - No-till soybean with cereal rye cover crop
  - Conventionally tilled corn
  - No-till corn
  - Alfalfa
  - Permanent pasture

The undies were dug up on November 7, 2015. One pair was unable to be located the No-till corn sample, so only 5 pairs were analyzed. Or you could say that the soil scientist lost their shorts in this soil health experiment. The undies were then lightly washed, dried, and a percent of underwear lost calculation (% Decomposed) was made.

Management Practice	Begin wt. (g)	End wt. (g)	% Decomposed
Permanent pasture	54.6	36.6	33.0%
No-till soybean w/rye cover crop	54.9	41.5	24.4%
Alfalfa	55	30.2	45.1%
No-till corn	unable to locate after 6 weeks		
Conventional till corn	55.6	55.3	0.5%
No-till soybean	57	44.4	22.1%

The results were quite varied but really illustrated NRCS' Four Soil Health Principles.

1. Use plant diversity to increase diversity in the soil. (Alfalfa, Permanent pasture, Soybean w/cover crop)
2. Manage soils more by disturbing them less. (all except Conventional till corn)
3. Keep plants growing throughout the year to feed the soil. (Pasture, Soybean w/cover crop, Alfalfa)
4. Keep the soil covered as much as possible. (all except Conventional till corn)

The Permanent pasture, Alfalfa, and No-till soybean with rye cover crop fits into all 4 of these categories and they were the top 3 as far as percent of undies decomposed.

The No-till soybean fit in to 2 of the Soil Health categories and it was next in the rankings.

Conventional till corn fits none of the Soil Health categories and it was a very distant last place. Almost none of the undies were decomposed.

A visual illustration can be seen in Figure 1 below.



Figure 1. Summary of experiment.

The Staff of the Waverly SSO also came up with many inappropriate innuendoes relating to undergarments and soil health. These analogies were not fit to share in this article.

If you have comments or inappropriate innuendoes of your own to share on this experiment, the Staff of the Waverly Soil Survey office can be reached at:

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A brief (pun intended) video of this experiment can be seen at the Farm Babe's Facebook Blog at:  
<https://www.facebook.com/iowaFarmBabe/videos/1651895398426231/?pnref=story>

This experiment was done as part of the Innovative Farmers Association of Ontario (IFAO) #soilyourundies contest. Information can be found on their website: [www.ifao.com](http://www.ifao.com)