



Plant your pants!

Soil health is important for growing plants and encouraging bugs, which provide food for small birds and help support the whole ecosystem. This fun experiment can help show how healthy your soil is.

Pants are made from cotton, which is an organic material made from the soft tufts of fluff from cotton plant seeds. Because it's plant-based it can, in the right conditions, rot down to compost in the same way as vegetable scraps and paper. Healthy soil provides the perfect conditions for this, so cotton pants planted in it turn to compost very quickly. If soil isn't so healthy, it takes longer.





At a Community Gardening session in November, we buried several pairs of (second hand but clean) pants in beds around the Root'n'Fruit Community Allotment. We marked them with colourful painted stones. In February, we dug them up to see what was left. If pants are planted in warmer months, they should be dug up quicker.

We also tested the pH of each area when we dug up the pants. We took a little soil from the bottom of the hole, added just enough water to moisten it, and tested with litmus strips. Most plants prefer soils close to neutral, but some like slightly acidic or slightly alkali.



Community Gardening regular Andy tests soil samples with litmus strips.

Results

Plot Number & description.	pH	Photo of plot 21/11/2023	13/02/2024
1 The side of a plot used for broad beans.	Not tested		Marker had been moved and pants could not be found.
2 Root veg bed, replanted with garlic over winter.	7 neutral		 <p data-bbox="900 1346 1406 1377">Several holes have appeared in the fabric.</p>
3 Courgette plot, replanted with garlic over winter	6 slightly acidic		 <p data-bbox="900 1848 1316 1879">There is little sign of biodegrading.</p>

<p>4 Bed near the pollinator area</p>	<p>8 slightly alkali</p>		 <p>Several large holes and a number of smaller ones.</p>
<p>5 Rhubarb patch</p>	<p>7 neutral</p>		 <p>Large holes have appeared and there are a number of white blemishes, which appeared to be some kind of fungus.</p>

Conclusions

The large holes in most of the pants show that there is activity in the soil. This is an indication that the soil is generally healthy.

The pH for most of the plots was close to neutral, meaning that the soil is well balanced. Understanding that one bed is slightly alkali and another is slightly acidic can help us plan which crops to grow where.

The only pair of pants that did not have significant holes was in bed 3, which was also the slightly acidic one. It may be that the soil in this bed is not as healthy as the others, but it still provides good crops so it is not a problem.

One pair had white marks on. They also had large holes. The white marks were likely to be some kind of fungus, as many are involved in decomposition.

We replanted all of the pants and will dig them up again in a couple of months to track further biodegradation.