

Short communication

Mixing manure with charcoal – effects on seedling growth

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Charcoal can be used for carbon sequestration in soil. Here we investigated if there were some benefits of mixing charcoal with manure.

Fresh horse manure was judged on a scale from 1 to 5 regarding pleasantness. It received a score of 2. The manure was mixed with pulverized charcoal (ICA briquettes) until the mixture received a score of 4 regarding pleasantness.

Three small containers were filled with manure and three were filled with manure/charcoal mixture. Three seeds of garden cress (Weibulls) were planted in each container.

The soil samples received 5 ml water each daily. The pot trial was terminated after 8 days.

Out of 18 sown seeds, 8 germinated in the samples with manure and 9 in the samples with manure/charcoal mixture. Plant lengths varied between 7-26 mm in the samples with manure and 21-35 mm in the samples with manure/charcoal mixture (table 1).

One reason for the higher pleasantness of the manure/charcoal mixture could be gas adsorption of badly smelling compounds to charcoal.

Since the manure was fresh it might have been quite strong. The charcoal, with its adsorption capacity, may have helped to neutralize the manure and make it more favourable to plants.

Table 1. Effects of charcoal on growth of garden cress in manure.

Charcoal	Germination (%)	Length (mm)
No	89	19.9±5.6
Yes	100	26.1±5.2