SCIENTIFIC VERIFICATION: BENEFITS OF COMPOST USE IN LANDSCAPES, FARMING, REMEDIATION & EROSION CONTROL

Below is a partial list of scientifically verified horticultural and environmental benefits of compost use, with citations for published documentation.

**Scientifically Verified Compost Benefits (citations below)**

1. Improves soil structure and porosity – for better plant root growth, reduced runoff and erosion
2. Reduces density of clay soils – increasing moisture infiltration, reducing erosion and runoff
4. Supplies and supports proliferation of beneficial microorganisms in soils and growing media
5. Supplies organic matter and humus – aiding soil aggregation and plant nutrient uptake
6. Improves soils cation-exchange capacity (CEC) – improving nutrient retention
7. Helps plants to more effectively utilize nutrients
8. Buffers soil pH – improves nutrient availability and soil aggregation
9. Binds and degrades specific pollutants

Compost partially derived from food waste contains more nutrients for plant uptake, in essence a higher NPK*1 value.

*1 = Nitrogen, Phosphorous, Potassium

1. Improves soil structure and porosity – for better plant root growth, reduced runoff and erosion
   - Avnimelech, Shkedy, Kochva, and Yotal. The Use of Compost For Reclamation of Saline and Alkaline Soils.
2. Reduces density of clay soils—increasing moisture infiltration, reducing erosion and runoff

3. Improves moisture-holding capacity of sandy soils—reducing water loss and nutrient leaching.

4. Supplies and supports proliferation of beneficial microorganisms in soil and growing media

5. Supplies organic matter and humus—aiding soil aggregation and plant nutrient uptake

6. Improves soil cation-exchange capacity (CEC)—improving nutrient retention
   • Epstein, Taylor and Chaney. 1976. Effects of Sewage Sludge and Sludge Compost Applied to Soil on Some Soil
BENEFITS OF COMPOST CONT.


7. Helps plants to more effectively utilize nutrients


8. Buffers soil pH –improves nutrient availability and soil aggregation


9. Binds and degrades specific pollutants

- Soil and Water Conservation Society with the Natural Resources Conservation Service. 2000. Soil Biology Primer