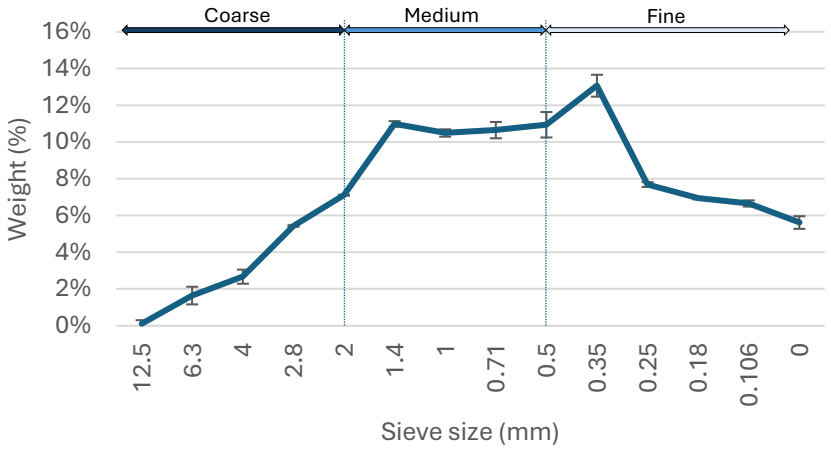
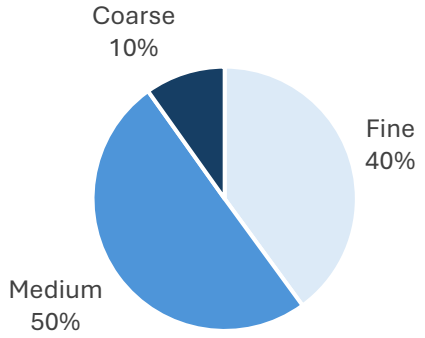
Product: Bark fiber by extrusion (S3-02)

Source: Extruded pine bark from Georgia, USA.
Date received: 5/6/2025
Moisture content upon receipt: 9%
Plant species: *Pinus taeda,* Georgia
Processing equipment: Twin screw extrusion
Nominal equipment size:
Raw material particle size at processing:
Raw material moisture content at processing: 48-52%

Particle size distribution



Particle size classification

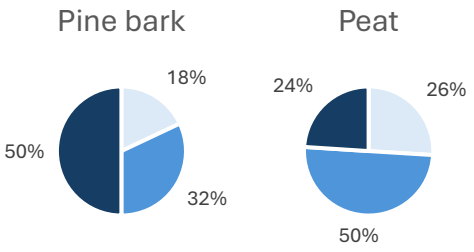


Particle size distribution:

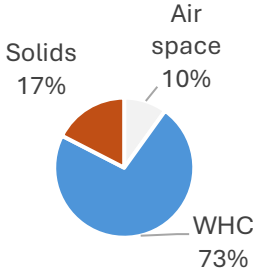
Particle size distribution skews towards medium and fine particles.

When analyzed by particle size class, it is much finer than most pine bark substrates and has more fines and fewer coarse particles compared to peat (reference values below).

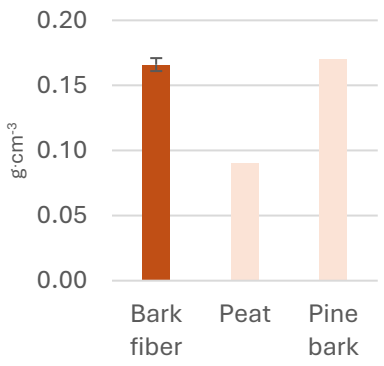
Unlike extruded wood, this material was flowable and similar in texture (feel) to fine peat or bark.



Physical properties

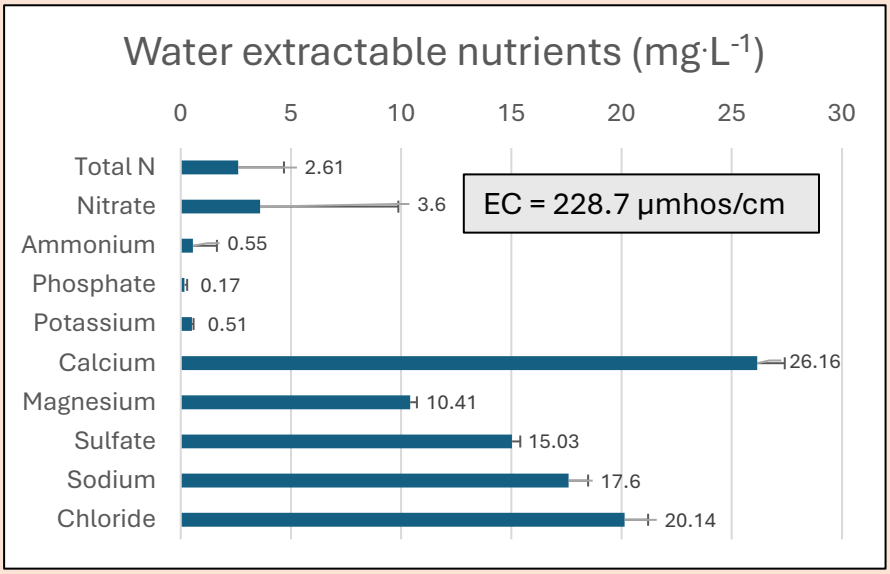


Bulk density



Physical properties:

Total porosity is typical at 83%. Air space is low and water holding capacity is high. Based on these data, it should hold water more like peat than other bark-based materials. This fiber has similar bulk density to pine bark.

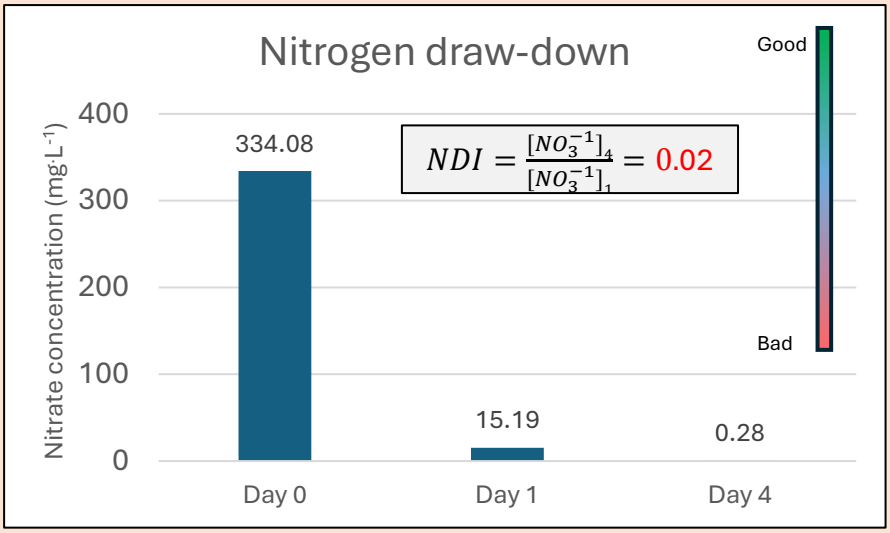


Water extractable nutrients:

Water extractable N, P, and K are low. P is lower than most other bark based substrates.

Ca and Mg are typical of bark based substrates, and are a suitable Ca:Mg ratio.

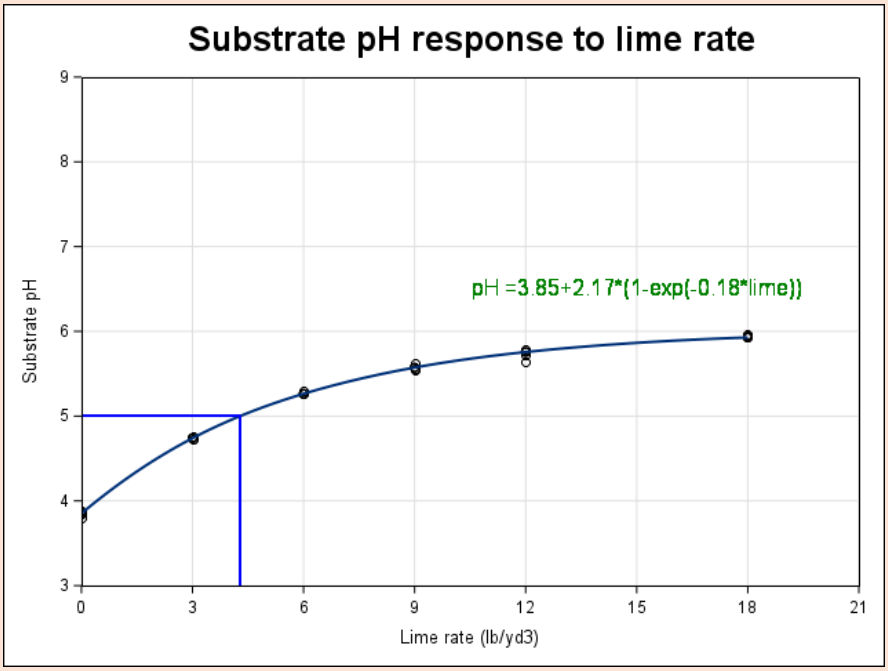
Na and Cl are sufficiently low.



Nitrogen draw down index :

Nitrogen draw-down index (NDI) is about 0.02, indicating a high rate of N immobilization, typical of wood-based substrates. Extra N will likely be necessary for proper crop growth.

This value is based on 57.6 g dry mass and 0.166 g·cm^{-3} bulk density.



Lime rate titration:

Lime calibration curves suggest a relatively low pH of the substrate alone (pH 3.85). Lime amendment can raise pH easily to pH 5.5, and as high as 6.0.

This curve does not inform pH buffering, only how the substrate responds to initial lime application.