

# RootThru Biofabric: Integrated nutrient and weed management for leafy greens, carrots, and strawberries

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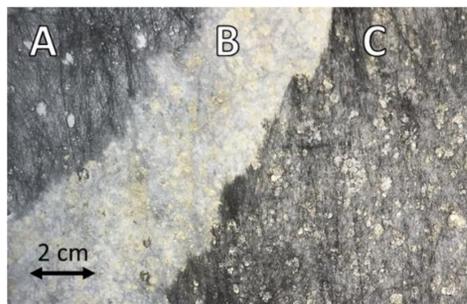
## Background

### Current weed management options for high-density plantings are inadequate

- Consumers want fewer or no pesticides
- Tillage options are limited, injure crops, and reduce stand density
- Landscape fabrics and plastic mulch film are effective for fruiting crops, but there is no comparable solution for leafy greens, carrots, and matted row strawberries

### RootThru Biofabric is a weed management solution developed specifically for high-density plantings

- Crop seed or clone roots grow through the fabric from above and weed seedling shoots are suppressed below it
- Fertilizers can be embedded in the biofabric to feed the crop as it grows
- Our goal is to refine the composition of RootThru Biofabrics for optimum weed suppression and crop performance in high density specialty crop plantings



RootThru Biofabric (above) includes 2 or 3 layers: Outer layer(s) made of spunbond polylactic acid (PLA) (A and C above); and the inner layer is meltblown PLA with or without embedded fertilizers (B above)

## RootThru Biofabric Installation and Use

1. Soil is prepared and biofabric is laid
2. Thin layer of compost (or other weed-free media) is applied to biofabric (before or after seeding, or both depending on species)
3. Seeds of crop planted into compost
4. Irrigation applied over the top of biofabric
5. Crop germinates and grows through biofabric
6. Weeds suppressed beneath biofabric, and crop fed by any embedded fertilizers
7. Biofabric can be used to aid in harvest or left in the field to be reused for additional plantings



## Early Results and Conclusions



- Greenhouse studies showed carrot and lettuce can grow through biofabric; lettuce yield increased by 72% when soybean meal fertilizer added to fabric (top left)
- Biofabric reduces weed emergence by 93% to 100% (bottom left)
- Biofabric increased 1<sup>st</sup> year stand density by 27% in strawberries (right)
- 100% establishment of beet greens, arugula, and kale (right)
- Analyzing water and nitrogen dynamics under biofabric



## Interested? Contact us!

- Are you interested in trying a RootThru Biofabric on your farm?
- Do you want to learn more?
- **Scan the QR code to send us an email!**  
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## Acknowledgements

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