

Local Case Studies of Compost Use

Jason Huffaker - Minick Materials

Trish Morris - Ideal Homes

Julia Laughlin – Prairie Earth Gardens



Compost is the key to controlling erosion



There are several options for applying our finished product









Ideal Homes Compost Blanket Trial - July 28, 2015





Ideal Homes Compost Blanket Trial August 14, 2015





Ideal Homes Compost Blanket Trial September 28, 2015



HWY 9 Trial - May 30, 2016



Before



2 Days



2 Days



2 Days

Highway 9 Trial - June 2016



9 Days



9 Days



9 Days



2 Weeks

Highway 9 Trial - July 6, 2016



PARTICIPANT



US Composting
Council

*Seal of Testing
Assurance[®]*

Frank Franciosi
USCC Executive Director

A handwritten signature in black ink, appearing to read 'Frank Franciosi'.

Minick Materials
9/13/16-9/12/17

compostingcouncil.org

MINICK MATERIALS

SINCE 1958



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Erosion Control Beyond Silt Fence

Trish Morris
Community Development Project Manager
Ideal Homes

Compost Socks

Very Low Maintenance

Aesthetically pleasing

Stackable

Easily adapts to terrain

Can be repurposed to add compost to soil

Compost Socks

Quick and Easy Installation:

160 Feet of Compost sock was rolled out in less than 3 minutes with an additional 30 minutes of driving stakes

Compost Socks

Filtrex stacked to protect project



Filtrex in place of silt fence for perimeter control



Compost Blankets



Compost Blankets



Compost Blankets

1 month after install



Compost Blankets

1/2 " to 2" application to reduce run-off and the formation of ruts by increasing the soil's ability to absorb rainfall

Improves poor soil health giving desirable vegetation the nutrients it needs to grow quickly

Compost Blankets

Research by Brit Faucett of Filtrex International has shown that a 2 inch blanket on a 3:1 slope with 4 inches of rain in 2 hours the runoff volume when tested against an untreated slope reduced runoff volume upwards of 90 %

Peak runoff was reduced by 79 %

Total sediment by 96%

And the total nitrogen and phosphorus were reduced by 99%



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Using Soil and Compost Based Medias in Smartpots for Greenhouse Tomato Production

Julia Laughlin

Horticulture Professor/Department Head
OSU-Oklahoma City (Retired)

Host of KTOK's 1000 am "Garden Party" Radio Show

Owner - Bella Verde Gardens - Choctaw

Manager - Prairie Earth Gardens - OKC

Prairie Earth Gardens (PEG)

We are a small gardening operation in northeast Oklahoma City, and have been in operation since Spring, 2015.

We grow fruits, vegetables, edible flowers, micros, shoots and herbs using ecological and sustainable production practices to provide to a select group of customers and chefs on a year-round basis.



We practice on-farm composting but also supplement our gardens with cover crops and Dark Forest compost from Minick Materials



We completed a new complete controlled environment greenhouse at PEG in January 2016. In addition to growing the transplants needed for our farm and for several other farms, we wanted to grow year round micros, shoots, herbs, specialty greens, sweet peppers, tomatoes and cucumbers.

But we were determined not to produce using chemical hydroponics and were not prepared to set up an aquaponic system.



I did quite a bit of research and could not find a great model system for organic greenhouse tomato production unless they involved soilless medias. So we worked with **Minick Materials** to help design a soil/compost based media that could provide the base mineral needs of heavy feeding vegetable crops while allowing the drainage and porosity needed for growbag container production in a greenhouse.



We also worked with the OKC company **High Caliper Growing** to help us determine the ideal bag size for production of the various crops.



Please note that this production example is only an applied research project, not scientific!



We used 10 and 20 gallon Smartpots. We also experimented with putting 2 plants in a 20 gallon bag. Before planting we also treated the medias with a mycorrhiza product



Jason Huffacker, from Minick Materials, custom blended 3 different mixes for us to try

Mix 1

50% Dark Forest Compost

50% Garden Ready Soil

Mix 2

50% Dark Forest Compost

30% Garden Ready Soil

20% Expanded Shell

Mix 3

60% Dark Forest Compost

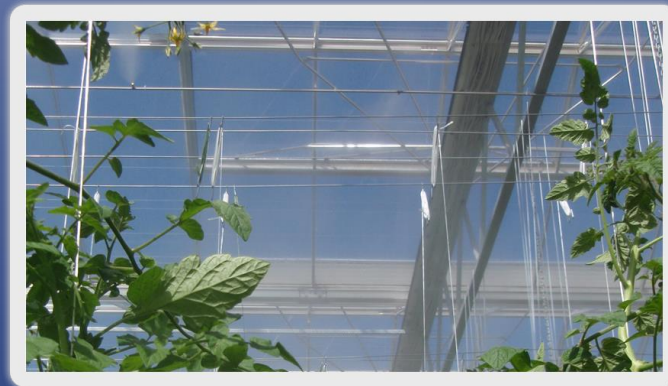
10% Garden Ready Soil

30% Expanded Shell

We created an 8 foot trellis system with “Tomahooks”



Soil borne and foliar diseases are a serious issue with tomatoes in greenhouses. Conditions, including temperature and humidity, are ideal for the development of pathogens. Our tomato varieties were selected with high disease resistant qualities for that reason. We also scouted regularly for insect pest and used organic sprays as needed



We planted “Trust,” “Early Girl,” “Sungold” and “Juliet” tomatoes and trained to a single stem on the tomahooks and removed all suckers.
Transplants went into the bags in early February



Also, since tomatoes are heavy feeders, we supplemented with granular organic and bi-monthly kelp/seaweed sprays.

















All 3 of the medias worked great. I think my preference was Mix 1 which was 50/ 50 garden ready and compost. I think because the bags are highly aerated (plus our very careful irrigation schedule) we limited any drainage issues. I also believe the plants responded to the high level of organic matter in this media.

My choice on Smartpot size for single tomato plants is the 10 gallon. Two plants in the 20 gallon also worked well, but training was a little more difficult.

We are also successfully using the soil/compost based medias and Smartpots for our herbs, edible flowers, specialty greens, sweet peppers and cucumbers.

