

Vertical Growing Strawberries in Stacked Pots by



Scenic Valley Farms

- Designs and manages high tunnels, climate control systems, and solar thermal heating technology, vertical growing, composting, recycle food waste for cities, food pantries
- Fifteen high tunnels Wisconsin, sizes - 30x64, 30x72, and 30x96
- Produce has been USDA organically certified tomatoes, peppers, cucumber, blackberries, raspberries, strawberries, etc
- Decades of agriculture and engineering experience



Scenic Valley Farm

- We have operated tunnels since 2009
- 2-3 additional tunnels planned for 2026,27,28
- Market produce (retail & wholesale) in Viroqua, Twin Cities, Chicago, Milwaukee. LaCrosse, Madison





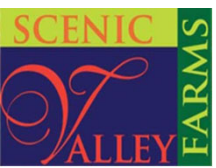
Readstown, WI Farm - 15
high tunnels

R&D - Grants

- USDA, EPA, NSF, SBIR Phase 1 and 2 - grants to develop an environmental controller and solar thermal heating for high tunnels, Vertical growing strawberries in stacked pots, compost systems for growers
- Received USDA SARE, USDA VAPG, NRCS, EPA and various MN/WI state grants - blackberries in high tunnels, SWD management, vertical strawberries, composting, food pantry, community gardens, farmers markets, food waste recycle for cities

Strawberries

- Since 2010, day neutrals in up to 3 tunnels
- Harvest berries from first week May through November, turn the heat off
- Varieties - tried them all, favorites Cabrillo, San Andreas, Portola, Albion, Monterey
- Yields 1-1 ½ #s per plant
- In 2017 began vertical strawberry growing effort
- Received a USDA SBIR Phase 1 grant, \$100k



Vertical Grow Strawberries in Soil Based Stacked Pots

- R & D since 2017
- Substrate - Soil vs Hydroponic
- Pots - look at all kinds, oval or round
- Pot support - stacked>>>>pots on racks
current racking built using 2 x 2>>>>steel
- **High tunnel - climate control resulting in higher yield, better quality, extended season, Better picking conditions, better maintenance conditions**
- Density - 80 to 100 plants per stack
100-150 stacks per 30' by 96' tunnel
8000-15000 plants per tunnel
- Yield - 1 ½ - 2 ½ #s per plant
- **Future - Prepare a USDA SBIR Phase 2 proposal due on March 18 2025 titled "Vertical Growing Strawberries in Stacked Pots" \$650K. We have a 50% chance of winning the grant.**

Vertical Grow Strawberries

Pics



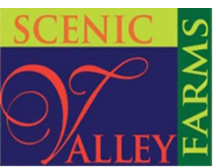
Vertical Grow Strawberries Pics



Vertical Grow Strawberries

Pics - current

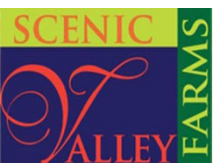




Vertical Grow Strawberries

Requirements

- **20'x30' high tunnel - more or less**
- **Pots - minimum 2 qts of substrate per plant**
- **Substrate - good quantity compost, top soil, tiger 90, gypsum, mycorrhizal fungi**
- **Weed control - plastic or wood chips mulch**
- **Racks - 2x2 wood or steel**
- **Dripline and other irrigation supplies**
- **Controller**
- **O2 Grow System (optional)**
- **LED, heater (optional)**



Vertical Grow Strawberries

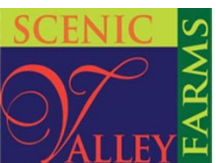
Pros/Cons

Advantages for growing strawberries vertically in soil in a high tunnel:

- 1. Grow and Harvest into November**
- 2. Climate control - no picking problems because of rain. Higher #1 fruit**
- 3. Easier for U-pick operation. Not on hands and knees to pick. Easier to commercially pick - pickers stand and pick.**
- 4. Taste better - High brix levels because berries are grown in soil. Versus typically vertical growing hydroponic systems that have lower brix levels.**
- 5. Higher yields than field grow berries**
- 6. Easier pulling runners and weed management**
- 7. Add another item, strawberries, to your CSA boxes**

Disadvantage growing vertically

- 1. Set up more time consuming**
- 2. Costier per plant to set up**



Vertical Grow Strawberries

SBIR Phase 2 Proposal

If you want to be part of the proposal, please contact me so we can talk. We need four participants defined by February 1 2025.

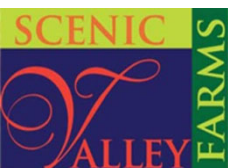
Development Recycle Compost System

- less than 30 days
- Reduced labor

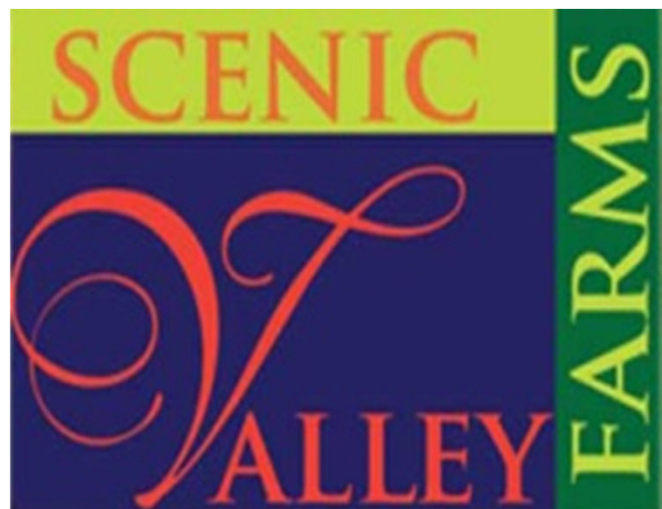
ReCycle Compost System (RCS) - A system located on a farm that produces organic aerobic "hot compost" and vermicompost from various inputs



RCS Inputs - Food waste from residential and business, yard waste (leaves), culled plant material from farm, livestock manure mixed with beddings
If input is food scraps, location of farms around the



Contact Us



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