

Hoop House/High Tunnel Soil Management

Unheated, In Ground, Greenhouse Growing

The benefits of high tunnel growing include greater heat gain, season extension, better control of foliar diseases and generally better control of all growing conditions. However, high tunnels must be ventilated to prevent over-heating and all water must be supplied by irrigation. When you build a high tunnel you are creating an IRRIGATED DESERT, which requires specialized soil management. Yields in high tunnels can be 2 to 3 times those attainable outside. High tunnel recommendations are designed to compensate for the much greater nutrient demand on these soils.

- Year 1: Routine Standard Soil Test

- Transitioning from open field to covered production
- Optimize pH, Organic matter, and Nutrient Reserves

- Year 2 & 3: Basic High Tunnel Test

- checks & fine tunes Soil Fertility Reserves
- monitors for Nutrient Salt Buildup
- checks Nitrogen Carryover
- N-P-K recommendations compensate for higher productivity & nutrient demand

High salt levels (> 4) should be flushed to avoid root damage

- ✓Uncover to natural Rainfall
- ✓Flush by Flooding or heavy Irrigation (4-6 in.)
- ✓Move your house to a new location

- Year 3 and Later: Long-Term High Tunnel Test

- most typically used by Commercial High Tunnel growers
- manages "Free salt" nutrient levels, rather than nutrient reserves
- Saturated Media Extract (SME) monitors water-soluble nutrient levels
- recommendations specific to adjust water-soluble nutrient levels

High salt levels (> 4) should be flushed to avoid root damage

- ✓Uncover to natural Rainfall
- ✓Flush by Flooding or heavy Irrigation (4-6 in.)
- ✓Add Peat Moss => "Dilutes" salt level , Improves water retention, Adds no nutrients

Resources for High Tunnel Construction, Management, Equipment & Supplies

Hightunnels.org (extensive listing of online resources for high tunnel growing)

Michigan State Hoop House/High Tunnels Website & Blog (hoophouse.msu.edu)

Cornell University High Tunnels Website (www.hort.cornell.edu/hightunnel/)

Maine Equipment & Seed Suppliers:

Johnnys Selected Seeds (www.johnnyseeds.com/)

Fedco (www.fedcoseeds.com)

Pinetree Garden Seeds (www.superseeds.com)