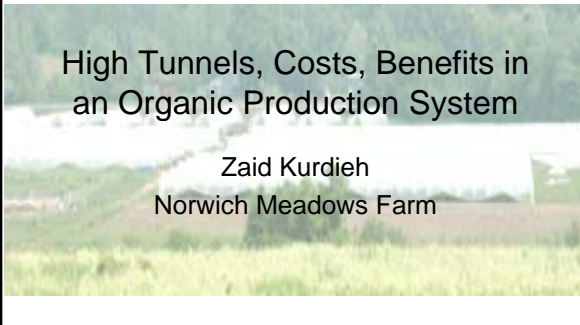





High Tunnels, Costs, Benefits in an Organic Production System

Zaid Kurdieh
Norwich Meadows Farm



History

- Began in 2003 with FarmTeks
- Floods of 2005: Saved by Tunnels
- By 2009 had 34 Tunnels
 - 9 FarmTeks
 - 8 Haygroves
 - 17 Farm made
 - A little over 4 acres

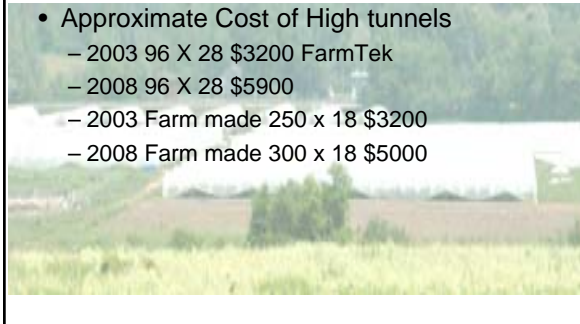

Crops Grown

- Artichokes, beans, greens, peppers, eggplants, okra, strawberries, raspberries, melons, tomatoes, cucumbers, other
- Major Crops:
 - Tomatoes 35 varieties
 - Cucumbers
 - Greens
 - Onions
 - Raspberries & berries
 - Peppers



Costs of Tunnels

- Approximate Cost of High tunnels
 - 2003 96 X 28 \$3200 FarmTek
 - 2008 96 X 28 \$5900
 - 2003 Farm made 250 x 18 \$3200
 - 2008 Farm made 300 x 18 \$5000


Cost of Production in Tunnels


- Low Cost
 - Fava, Squashes, Sweet Potato, Cauliflower, Artichoke
- Medium
 - Peppers, Eggplants, Strawberries, Raspberries
- High
 - Tomatoes, Melons (trellised), Cucumbers

Agronomic Issues

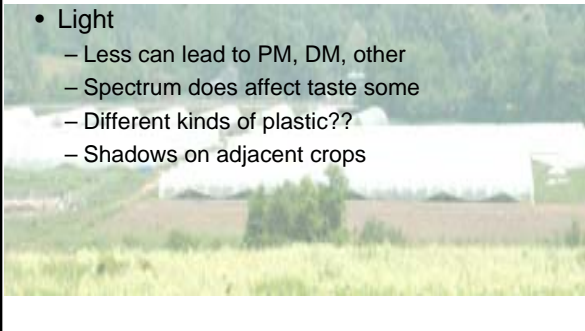

- Fertility
 - Early and late season N uptake
 - Soluble P is less available
 - Organic materials can clog
 - Intense use





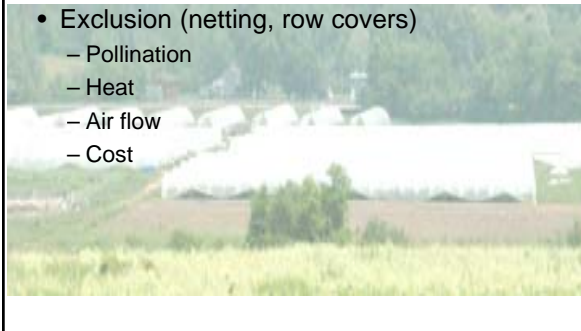
Agronomic Issues

- Light
 - Less can lead to PM, DM, other
 - Spectrum does affect taste some
 - Different kinds of plastic???
 - Shadows on adjacent crops


Agronomic issues

- Exclusion (netting, row covers)
 - Pollination
 - Heat
 - Air flow
 - Cost



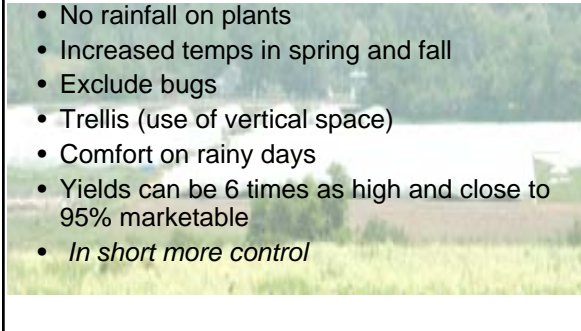


Gross Revenues

- Tomatoes:
 - 250 x 18
 - 4 rows x 120plants x 10lbs x \$4.75/lb = \$22800
 - 4 rows x 120plants x 22lbs x \$3/lb = \$31680
- Onions & Greens
 - 4 beds x 6000 x .33lbs/onion x \$2.25/lb = \$17820
 - 5 rows x 500 plants/row x \$2 = \$5000
- Fava & Cauliflower
 - 5 rows x 300lbs x \$4/lb = \$6000
 - 5 rows x 120 plants/row x \$4 each = \$2400

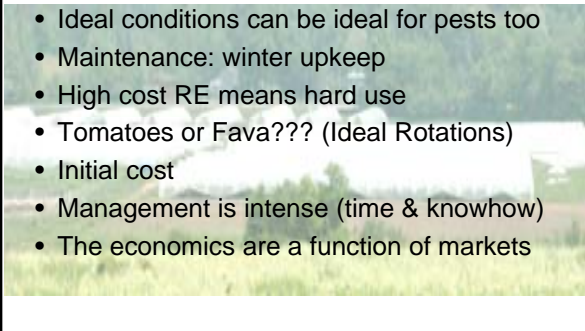
The Benefits

- No rainfall on plants
- Increased temps in spring and fall
- Exclude bugs
- Trellis (use of vertical space)
- Comfort on rainy days
- Yields can be 6 times as high and close to 95% marketable
- *In short more control*

The Detriments

- Ideal conditions can be ideal for pests too
- Maintenance: winter upkeep
- High cost RE means hard use
- Tomatoes or Fava???
- (Ideal Rotations)
- Initial cost
- Management is intense (time & knowhow)
- The economics are a function of markets




In the beginning.....





Sched. 80 PVC



Seedling house



Stages of construction



Preparations









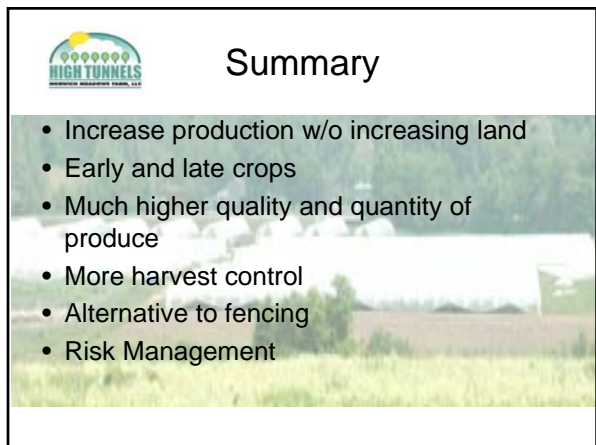


The culmination
Gramercy Tavern NYC



Summary

- Increase production w/o increasing land
- Early and late crops
- Much higher quality and quantity of produce
- More harvest control
- Alternative to fencing
- Risk Management



For more information:

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