

Vegetable Production in High Tunnels: An Overview

by:

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What IS a high tunnel?

- Not a greenhouse
- Not permanent
- Low cost, manual control of temperature control (venting), irrigation
- No floor
- Plant in soil in ground (usually)

Primary Expected Benefits

- Increased temperatures
- Extend spring & fall growing seasons
 - Marketing – can be a great opportunity, but be sure to explore market potential before planting
- Protection from the elements

Temperature

- Spring and fall – more frequent need for changing venting
- Daytime increases: can be 20-50° F on sunny days (summer or winter), 3-10° F if very cloudy
- Nighttime increases: ave. of 7° F, after a cloudy day, may be 0°
- If unvented for the long term in summer: 130° F (if 80° F outside)

Other Expected Effects

- Control soil moisture
 - Irrigation takes place only when and where you want it
 - Reduced leaching of nutrients
 - **Soil workable early in the spring
- Increased soil temperatures
- Significant temperature control
 - Tunnels open on hot days, kept closed on cooler ones

Less-Expected Effects

- Easier use of biological pest control for insect management
- Reduction in total amount of pesticides applied to plants
- Diseases and insects encountered are sometimes different than in field production

Effects on Crop

- Earlier harvest
- Increased yields
- Better quality (size and appearance)
- Increased shelf-life
- Can grow some crops that we couldn't otherwise due to short growing season or cool temps

Weather for comparison

- Rock Springs:
 - Last frost: 3rd week of May
 - First frost: 1st week of October
- Low temps in winter: typically -5° F, can get out down to -15° F
- High temps in summer: 80's, can have a week in the 90's