

Winter Vegetable Production In High Tunnels

10 Greatest Challenges



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Happy Hollow Farm, LLC

- 82 acres northern Moniteau, Co.
- 12 acres certified organic hay field
- 4.9 acres certified organic vegetable growing fields
- 1 acre certified organic orchard



#1 Marketing Outlets



Farmer's Markets

- CSA Outlet
- Free advertising
- Safety net

Community Supported Agriculture

- Close relationship with customers
- \$\$ at the beginning of the year
- Rigorous planting schedule
- Over 100 fruit & veggie varieties



#2 Tunnel Construction


Location, Location, Location...

- Soil type
- Slope vs. flat
- Hillside vs. valley
- Summer vs. winter
- North/South vs. East/West
- Site preparation is critical!!!!




Brand vs. Construction Design


- Size, strength & design
- Price \$\$\$
- Reliability of structure
- Reliability of company




Semi-Gothic



Gothic



Moveable



#2 Tunnel Construction

- Size, strength & design




#2 Tunnel Construction



Build it right the first time!

#3 Can You Grow It?

- Cold Hardy Plants
- Variety Selection



Final bed prep.

Soil aeration & compost applications

Transplanting

Direct seeding

#3 Can You Grow It?

- Cold Hardy Plants
- Variety Selection
- Moisture regulation



Transplants

Irrigation

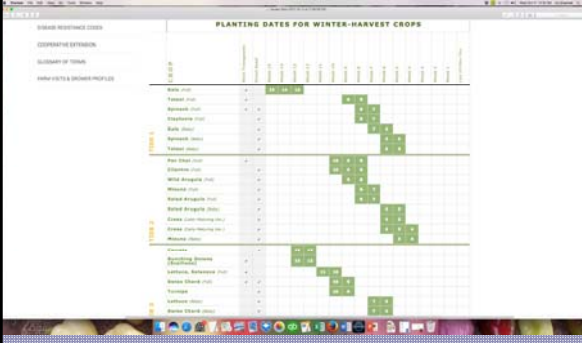
Scheduling

#3 Can You Grow It?

- Cold Hardy Plants
- Variety Selection
- Moisture regulation
- Timing!
 - Wednesday Nov. 15th
 - <https://sunrise-sunset.org/>




#3 Can You Grow It?




#4 Day Length

- Time investment
- Sunny days vs. Cloudy days
- Rate of plant growth slows drastically
- Row Cover!!!




#5 Temperature Regulation "ventilation"

- Time investment
- Daily maintenance & adjustments
- Sunny days vs. Cloudy days
- Row Cover!!!




#6 Pests

- Aphids
- White flies
- Scale
- Moles
- Voles



#7 Wash/Pack House

- Enclosed
- Walk-In coolers
- Warm water
- Wash gear
- Heated space



#8 Labor

- Cash flow
- Proximity to work
- Full time vs. Seasonal vs. Part time



#9 Knowledge

- Whole new set of rules
- Weather fanatic
- Heat / no heat?
- Lights / no lights?



#10 Pros & Cons

<p>Pros</p> <ul style="list-style-type: none"> • High quality product 	<p>Cons</p>
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#10 Pros & Cons

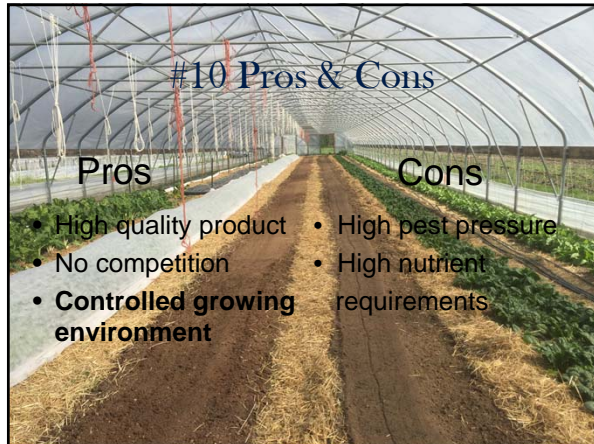
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<p>Pros</p> <ul style="list-style-type: none"> • High quality product • No competition 	<p>Cons</p> <ul style="list-style-type: none"> • High pest pressure
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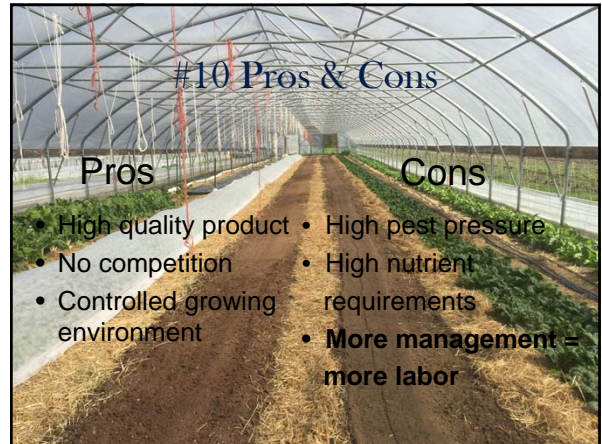
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#10 Pros & Cons

Pros	Cons
<ul style="list-style-type: none">• High quality product• No competition• Controlled growing environment	<ul style="list-style-type: none">• High pest pressure• High nutrient requirements



#10 Pros & Cons

Pros	Cons
<ul style="list-style-type: none">• High quality product• No competition• Controlled growing environment	<ul style="list-style-type: none">• High pest pressure• High nutrient requirements• More management = more labor



Let's Get Growing!

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