

# Unheated flower baskets above tomatoes

a Northeast SARE project  
by  
Judson Reid, Nelson Hoover, Neil Mattson



## Tunnels

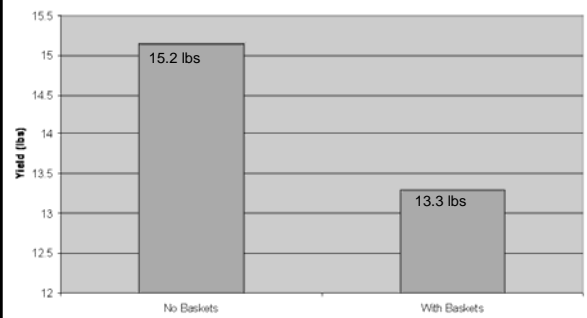
## Tunnel Tomato Economics

- 5 square feet per plant
- 96x30' ft tunnel can easily grow 500 plants
- 500 plants x 20 lbs per plant=10,000 lbs
- Return of \$5000-20000 per tunnel/year
- Return per square foot=1.67-6.67



## 2009 Data

Tomatoes Grown With or Without Hanging Baskets Above Them  
Average Yield Per Plant

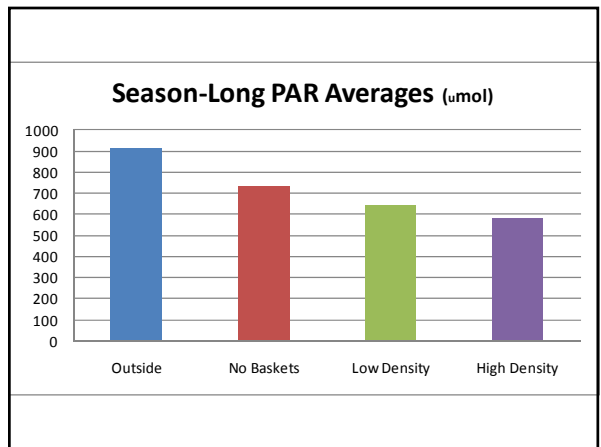


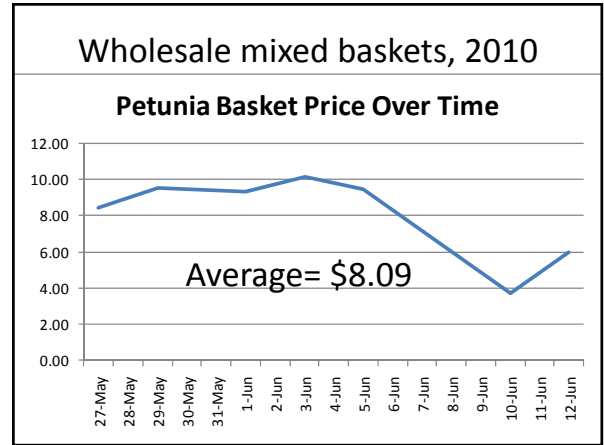
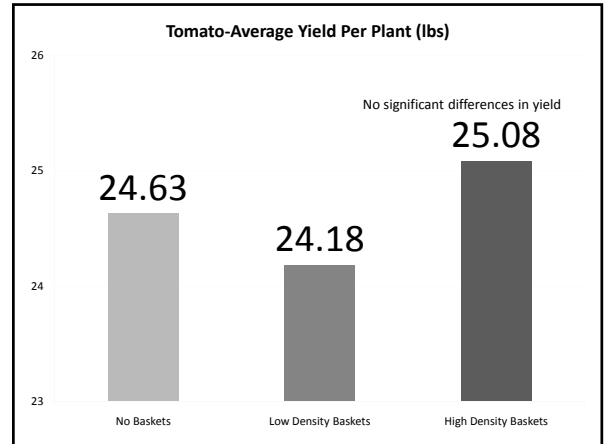
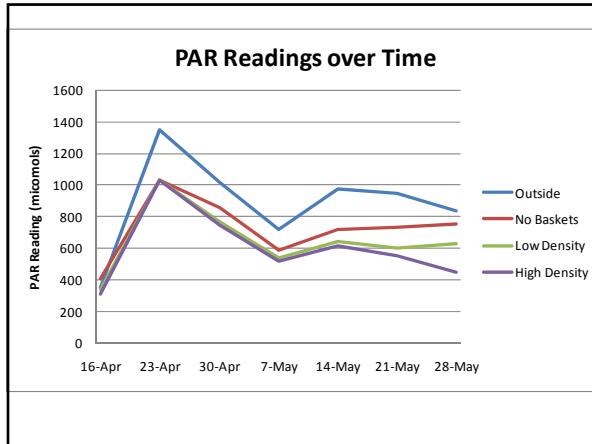
### 2009 Economics

- Baskets averaged \$10.01
- Inputs were \$5.6/basket
- Net of 4.41/basket or \$1323/4800 sq ft
- However we lost tomato yield of \$1065.6.
- Each basket netted us \$0.73.

### 2010 Trial

- Repeat of 2009
  - Tomatoes and petunias seeded and transplanted on same days
- Two different basket densities
  - 32 sq ft/basket (low density)
  - 16 sq ft/basket (high density)





Expense	\$ per 12" basket
Seed	0.64
Potting soil	0.89
Basket	1.09
Fertilizer/acid	0.08
Irrigation water	0.01
Transplant (GH)	0.58
Labor (per table 1)	1.3
<i>Total</i>	4.59

2010 Economics

- Baskets averaged \$8.09
- Inputs were \$4.59/basket
- Net of 3.50/basket or \$1050/4800 sq ft (using the high density)
- No loss of tomato yield!

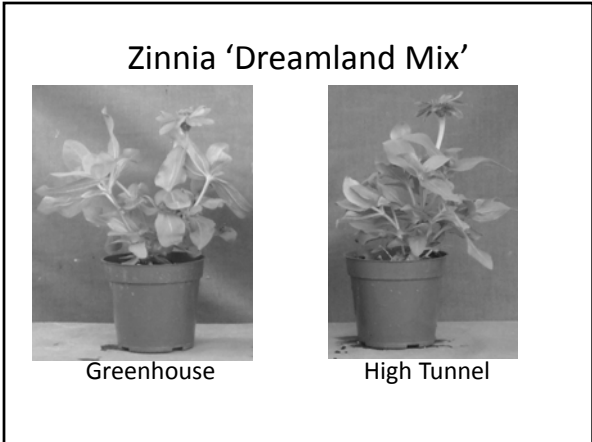
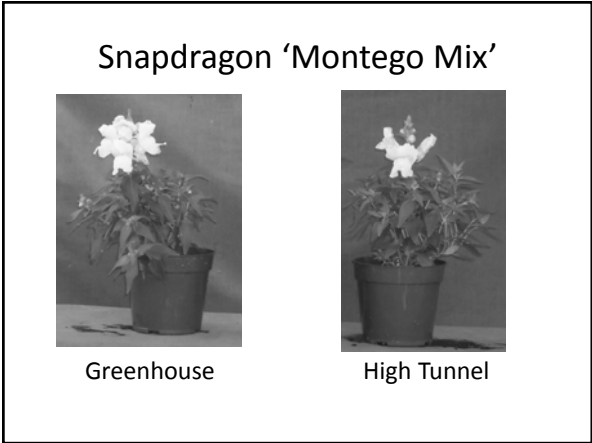
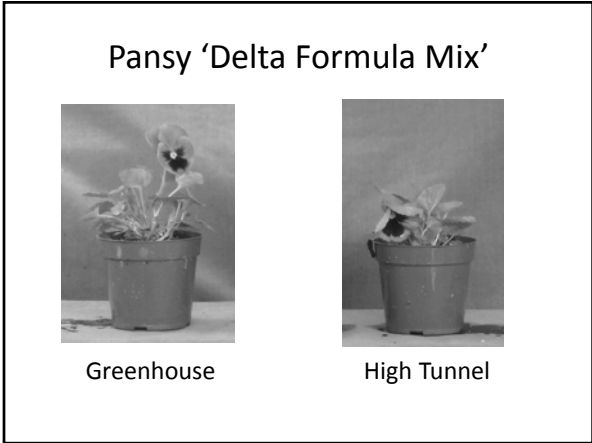
Retail Economics

- What if baskets averaged \$15.00?
- Inputs still \$4.59/basket
- Net of 10.41/basket or \$3123/4800 sq ft!

Pest and Diseases



- Recommendations
- Start your own seeds (tomato and petunia).
  - Scout for pests and diseases weekly.
  - Don't over irrigate baskets.
  - Don't do this unless you enjoy risk.



**Finishing in High Tunnel**  
(avg flower date)

	Greenhouse flower date	High tunnel flower date
Marigold 'Safari Orange'	<b>April 26</b>	May 1
Pansy 'Delta Formula Mix'	May 9	May 10
Petunia 'Dreams Midnight'	<b>April 29</b>	May 4
Snapdragon 'Montego Mix'	<b>May 4</b>	May 11
Zinnia 'Dreamland Mix'	<b>April 30</b>	May 6

### Plant Size (Fresh weight in grams)

	Greenhouse FW	High tunnel FW
Marigold 'Safari Orange'	46.6 g	47.0 g
Pansy 'Delta Formula Mix'	20.6	<b>25.4</b>
Petunia 'Dreams Midnight'	13.5	<b>15.0</b>
Snapdragon 'Montego Mix'	15.5	<b>17.8</b>
Zinnia 'Dreamland Mix'	<b>14.3</b>	12.1

### Conclusions

- Growing vegetables and flowers together is risky.
- High tunnels can be used for petunias.
- Other flowers may not give the same growth or economic response.

### Future work

- What other annuals can be grown in this settings?
- Fuseable seeds?
- Can we grow shade tolerant ornamentals under vegetables?