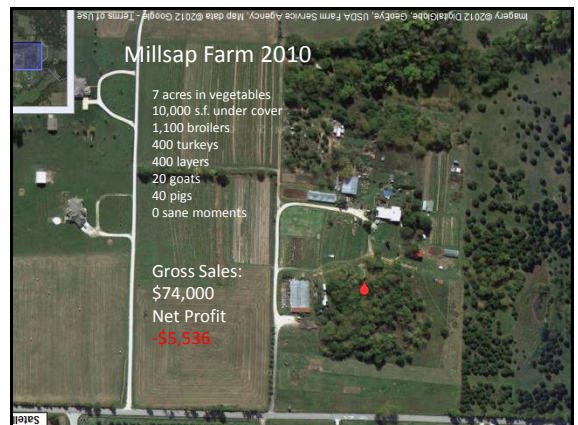
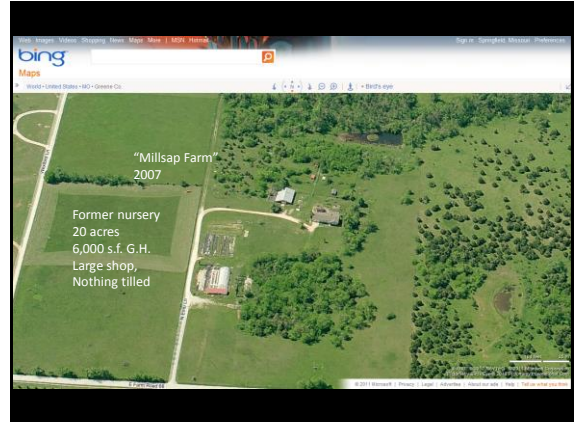


# Diversifying to create Resilience

by Millsap Farm





Millsap Farm  
2014

2 acres in vegetables  
12,000 s.f. under cover  
0 broilers  
0 turkeys  
20 layers  
0 goats  
3 pigs  
Excellent staff  
Pizza night weekly  
in summer  
5 weeks vacation



Millsap Farm  
2014

2 acres in vegetables  
12,000 s.f. under cover  
0 broilers  
0 turkeys  
20 layers  
0 goats  
3 pigs  
Excellent staff  
Pizza night weekly  
in summer  
5 weeks vacation

Gross Sales:  
\$138,000  
Net Profit  
\$29,998



Millsap Farm 2015

2.2 acres in vegetables  
14,000 s.f. under cover  
100 broilers  
0 turkeys  
20 layers  
0 goats  
3 pigs  
Pizza night weekly  
6 weeks of vacation  
Staff with longevity  
Three full time staff on farm  
2-3 interns at a time

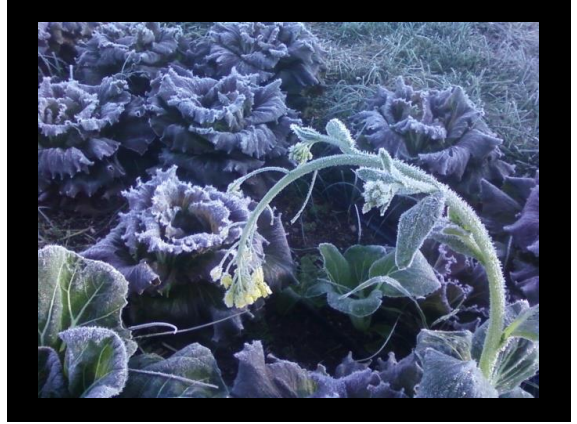
Gross Sales:  
\$214,000  
Approximate Net Profit  
\$40,000?




Why Do we need to develop  
resiliency in our farms and gardens  
(and our lives?)







Aphids and maggots and rots.

## Diversity + Clear Purpose = Resiliency:

Lessons from Wilderness Risk Management  
Risks increases exponentially when:

1. Plans and Criteria for Success are rigid
2. Timelines are unchangeable
3. Conditions are changing, and leadership fails to change with the conditions

All of these together mean you are flirting with disaster.

How we built resiliency into our farm:

Starting with a diverse plan which allows for variations

- ❖ Many Varieties
- ❖ Successions
- ❖ Extra seedlings

Use diverse equipment and practices which allow flexibility

- ❖ Row Covers
- ❖ Low Tunnels
- ❖ High Tunnels
- ❖ Greenhouses
- ❖ Mixed irrigation options

Plan for diverse

- ❖ Marketing
- ❖ Seasons

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## We grow 100's of varieties, year-round.

- Tomatoes
- Cucumbers
- Peppers
- Squash
- Celery
- Arugula
- Lettuce
- Beets
- Radishes
- Eggplant
- ETC.

For the fullest possible market booth/ CSA basket,  
we plan for storage and fresh harvest in the winter:

### Storage:

- Carrots
- Sweet Potatoes
- Irish Potatoes
- Beets
- Turnips
- Garlic
- Onions
- Apples
- Winter Squash
- Cabbage
- Kohlrabi
- Black spanish Radishes

### Fresh Harvest:

- Carrots
- Lettuce, Head and Leaf
- Kale
- Green onions
- Chard
- Arugula/ other greens
- Spinach
- Cabbage
- Beets
- Turnips
- Radishes
- Parsley/Celery/Cilantro

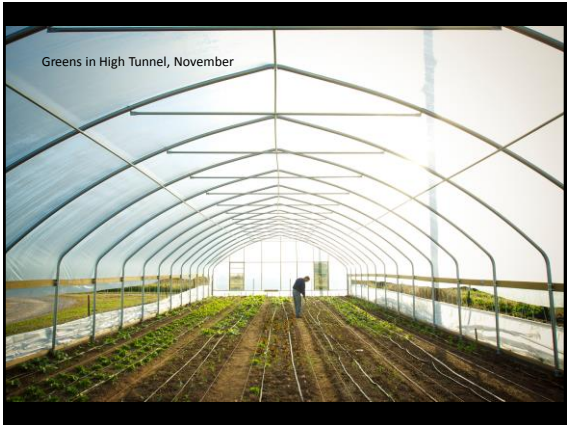




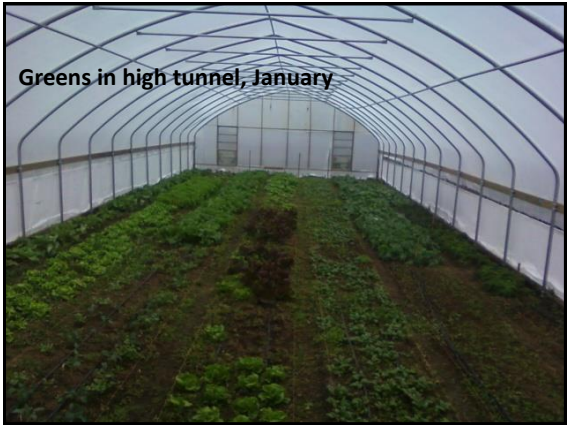
Successions add diversity in time.



Greens under row cover, December



Greens in High Tunnel, November



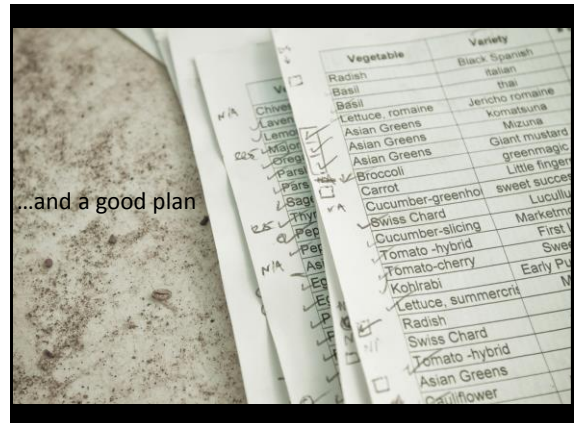
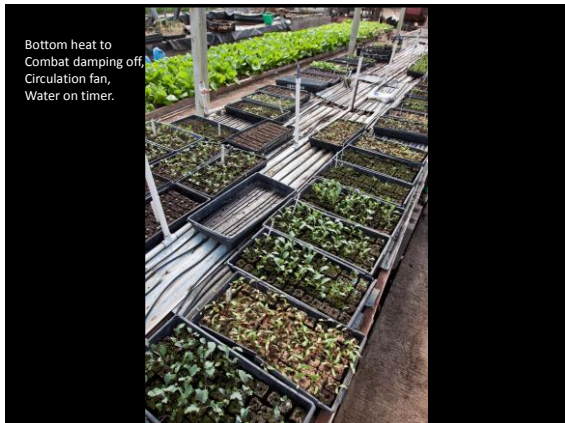
Greens in high tunnel, January



Lettuce and Tomatoes  
In Greenhouse, December







How we built resiliency into our farm:

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- ❖ Many Varieties
- ❖ Successions
- ❖ Extra seedlings

**Use diverse equipment and practices which allow flexibility**

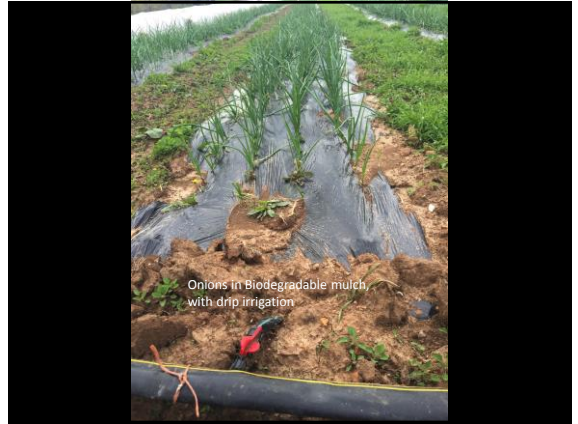
- ❖ Row Covers
- ❖ Low Tunnels
- ❖ High Tunnels
- ❖ Greenhouses
- ❖ Mixed Irrigation options

Plan for diverse

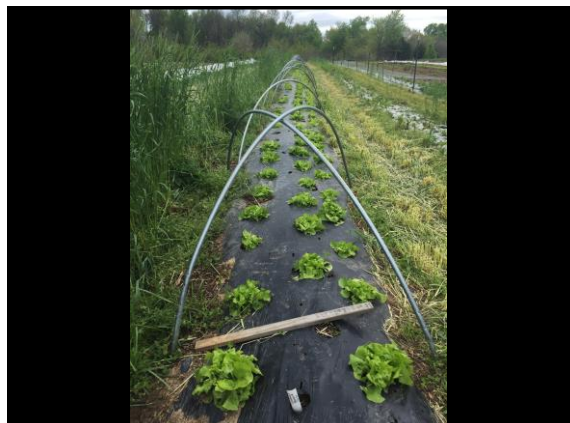
- ❖ Marketing
- ❖ Seasons

Every year the pest and weed challenges change. If you provide a diversity of environments on your farm or garden, you will have increased odds of success.





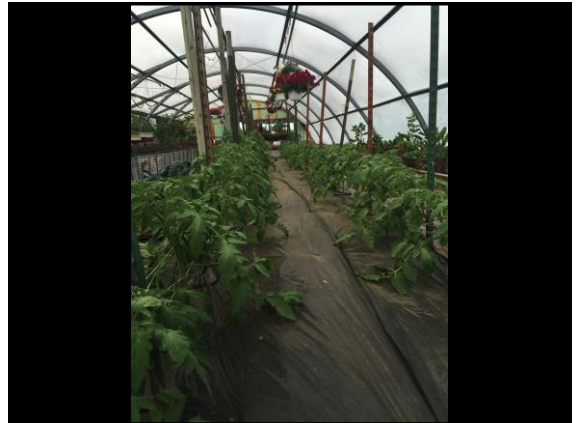
Lettuce on Millsap Farm, April 23, 2015



Tomatoes on Millsap Farm, April 23, 2015







Diversifying the environment after planting!





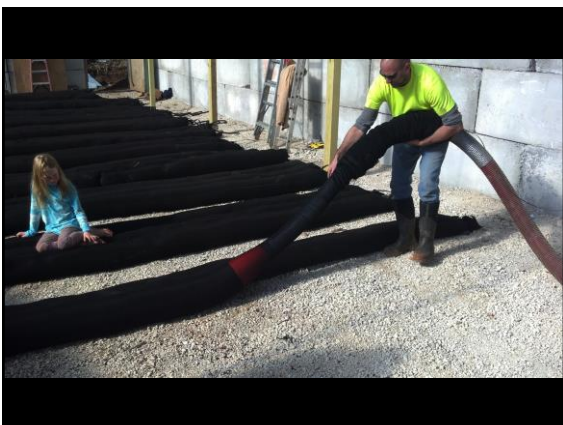




Resiliency:  
Good enough is perfect, don't  
invest too much, and stay  
flexible.







Costs to date for 72'x23' Chinese Earth Tunnel

Kit from Morgan County Seed:	\$5,000
Concrete blocks purchased and hauled	\$3,800
Excavator with operator	\$2,400
Gravel	\$1,000
Fasteners, insulation, and metal	\$1,000
Engineering	\$700
Compost soxx	\$1,200
Raised beds	\$600
Total to date:	\$13,800
Total	\$13,800
Square foot cost	\$9/s.f. Without labor

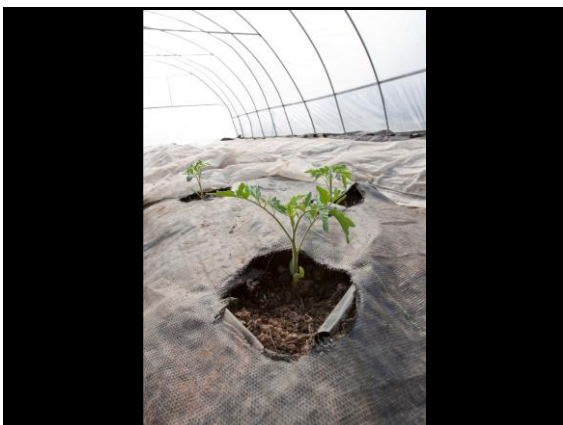
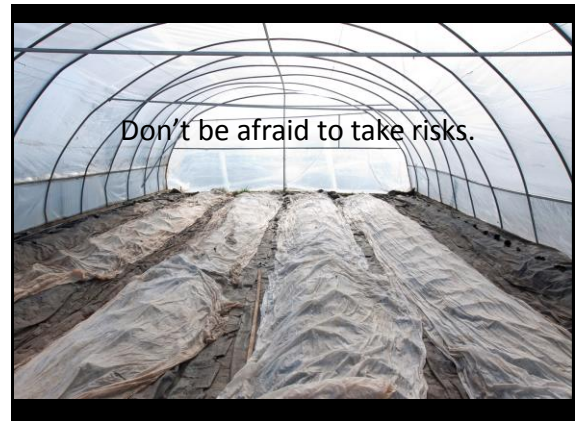


Advantages of High Tunnels in general:

- Less pesticide use
- Less erosion
- Less run-off
- Improved income for farmers
- Higher yields
- Longer growing season (extends the season at least 3-4 weeks on either end)
- Less energy use
- More localized food source

Advantages of Chinese High Tunnel:

- All of the above.
- Greater temperature stability.
- Better structural stability
- Longer structure lifespan
- Extends the season at least 2 months on each end.





# 5 year learning curve for any enterprise.

Millsap corollary: don't take on too much at a time.

