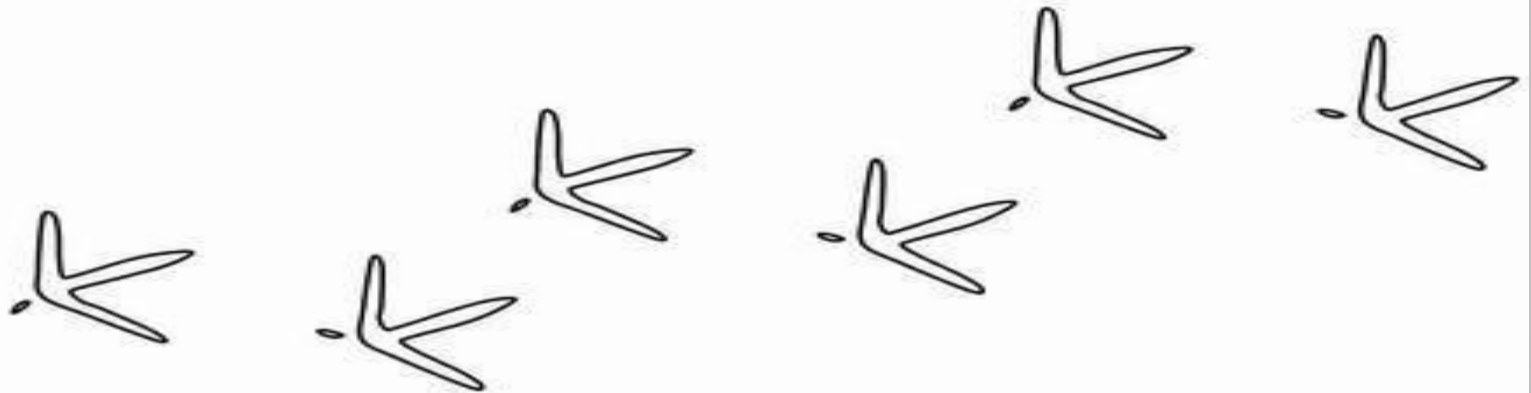


Diversified High Tunnel Rotations using Chickens in the Rotation/for Insect Control, Soil Fertility Management & Additional Heating

Kay Neff
Neff Family Farm.com

or

How to Fowl up a High Tunnel Operation



- Objectives
- Fertilization
- Weed and pest control
- Heat management
- Extended growing season

Savage Chickens

by Doug Savage



www.savagechickens.com

- High cost and use of propane used to grow herb and tomato transplants
- Managing soil quality and fertility in a chemical free system
- Controlling insects in a chemical free system

Problems



- 6 plot rotational system with rotations of herbs & vegetables
- Adding chickens and fallow in various combinations of plastic-covered, insect fabric, row covered and uncovered high tunnels, and low tunnels.
- Chickens will also be introduced into the system at various points for benefits of heating, fertility and insect control.

Solution



Erection of High Tunnels





Roll up sides help control temperatures during summer heat.

Straight sides make it easy to Attach chicken wire to keep chickens Contained.

Safety First



Branches of overhanging tree cut back to avoid winter shed.



- This tunnel erected over existing tomato planting.
- 1st Tomatoes Picked on Dec. 15th!





Preparing to pull plastic

Many hands are helpful.



**Find a calm day.
Or night.**

Wiggle wire is
the greatest
invention ever.



Completed tunnels

- **# 1-** 3 foot sidewalls with roll up sides
- **#2-** 7' sidewalls, Lexan sides
- **#3-** Quonset style, roll up sides
- **#4-** 3 foot sidewalls-Can be covered with wire, plastic, screen, or shade fabric



Our main focus

- Production of vegetable and herb transplants
- Potted herb and tomato plants for sales
- Planting and growing of produce for market



- **Brooder under plant bench**

High tunnel/Lexan sides



Tomato plants

Running brooder chicks under plant benches kept bottom temperature consistent without need for additional heat. Two heat lamps are used.

Bonus was rapid root growth on plants, and large run area for chicks.



Simple wooden frame covered in screen allows lots of light.



Plant bench over the Brooder

Plant bench is welded wire and wood. The only modification was using recycled plastic over the top, so the chickens are not watered.





**Extra insulation
achieved by using
tarps over hanging
basket poles**



I use this method only when
night temperatures are
predicted significantly under
35 degrees.





**Lack of wind
allows plants
to mature**

Nearly all the plants are grown in this high tunnel without additional heating beyond the brooder table.



- Now What???
- 1st plot- Out door Chicken Run for high temperatures

1st year of research grant,
Kansas beat highest temps
and drought since the
Dust Bowl!



Considerations for poultry

- A method of moving chickens from the brooder to next tunnel or run
- Need easy transport
- Fighting the homing instinct of flock
- Safety for chickens



- **Creation of Mobile Chicken House**



2 x 4 construction
Painted stud walls
Construction grade siding
Corrugated plastic roof



What's under it?



Base is welded mesh farm panel, secured on old boat trailer.

Chicken manure drops through to ground.

(this is the best part! I hate shoveling!!!)

Time to Move!



Mobile house is easy to transport from one location to the next.

(note the sad look of the non-amended soil outside the high tunnel.)

Attached to High Tunnel



Straw bales placed around base keep out winter drafts, predators, and break down with fallen manure at next rotation.





Interior view of Chicken House

Out door runs during the summer heat help reclaim poor unused ground



Reclaimed plot planted in Potatoes



Clean up was so fast,
we were able
to plant on
March 17th,
St. Patrick's day!



Uncovered in Summer

- Open High tunnel, sides with wire mesh.

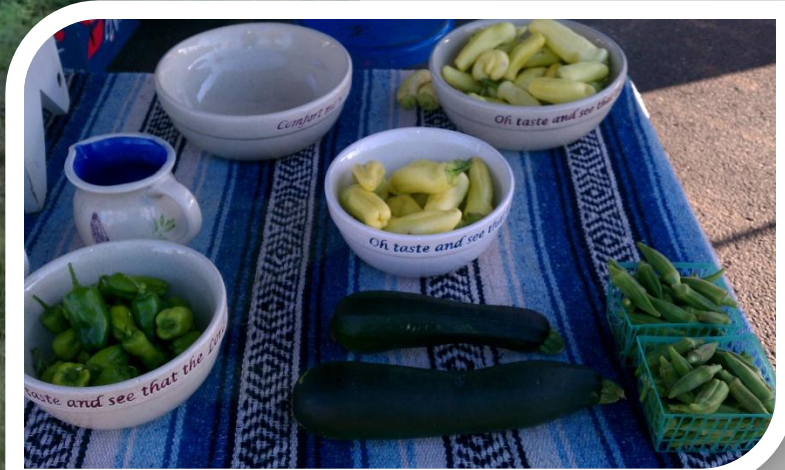


High tunnel planted in squash after rooster run



Reclaimed ground planted after rooster run, then 3 months fallow.

Uncovered, wire mesh protected.



- Chickens & Roosters run through high tunnels during fall and winter, completely cleaning out plant material

**5 mil Plastic covered
Roll up sides**



**I DREAM OF A BETTER WORLD
WHERE CHICKENS CAN CROSS
THE ROAD WITHOUT HAVING
THEIR MOTIVES QUESTIONED**



**Manure breaks
down faster in
high tunnels**

And no shoveling!!!



Soil was BEAUTIFUL!

Early planting of lettuces and chard meant we had produce for the opening day of Famer's Market first week of April.



Plant flats used as weed barriers

Walk ways
covered with
wood chips
and straw.



(I hate weeding
as much as
shoveling.)

**Soil improvement
apparent- Nitrogen and
organic matter up!**





Early lettuce and chard at Market

Customers love to hear about your growing methods.

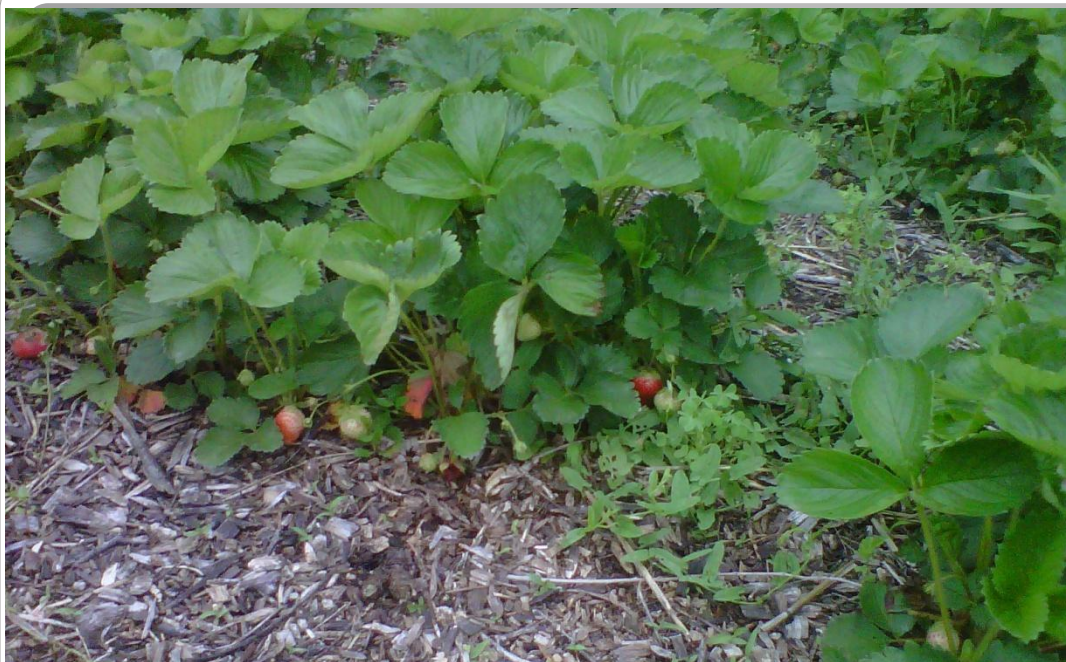
Pay attention to what the customers are saying, will help your marketing!



Your Free Recipes H

NeffFamilyFarm.com





Strawberries Spun Row cover

Kept birds and chickens out



Difficult to handle in wind

Bracing for added support especially during snow falls



Collapsed low tunnel using pvc method. This was a seminar from Great Plains Fruit and Vegetable growers. I suggest modification in heavy snow and wind.





**With poultry,
snow melts and
slides off roof
more readily.**



Shot through ice on door,
Interior never below 38
degrees

This is the only high tunnel
with back up propane for
seedlings.

What happens to the Chickens?

We are often asked by customers and other interested parties what happens to the chickens.

Naturally, we are thrilled when the pullets progress to egg layers; we sell the eggs at the local Farmer's Market.





An example of living on the farm...

A Baker's Dozen!



1st hen to sit a nest
in the high tunnel



**Hen and
chicks
moved to
under-
bench
brooder**

Equal Rights



The roosters are given the same opportunity to either lay an egg or sit a nest.



If not, we find another way for them to serve.
Or be served.



Seem Cruel?

To be fair, I remind you that the tomatoes and okra suffer the same fate.





The Positives!

- Added fertility to Soil
- Extended growing season
- Extra warmth in High Tunnels
- Significant drop in pest population
- Production was up by more than 50%

