



La Paix Farm
*Organically Grown Herbs,
 Sophisticated Produce & Related Crafts
 Workshops, Tours & Shop*

Myra Bonhage - Hale
 HC 64 Box 17
 Alum Bridge, West Virginia 26321
 (304) 269-7681

CHRISTMAS LIGHTS & DEER SCENTS c

A Research Project for the Northeast Region Sustainable
 Agriculture Research & Education Program. Farmer/Grower
 Grants. Myra Bonhage-Hale, La Paix Farm, Alum Bridge, WV

1997

TABLE OF CONTENTS

1.	Content	1-1
2.	Abstract.....	2-1
3.	Proposal.....	3-1
4.	Map of Farm with SARE site.....	4-1
5.	Deer Diary (Observation record).....	5-1
6.	Comparison Chart - 9 trials.....	6-1
7.	Conclusion.....	7-1
8.	Appendix	
	a. Photos.....	8-1
	b. Press.....	8-8
	c. List of Plants Eaten by Deer.....	8-9
	d. List of Plants Not Eaten by Deer..	8-10





ABSTRACT

CHRISTMAS LIGHTS & DEER SCENTS

A Research Project for the Northeast Region Sustainable
Agriculture Research & Education Program. 1997

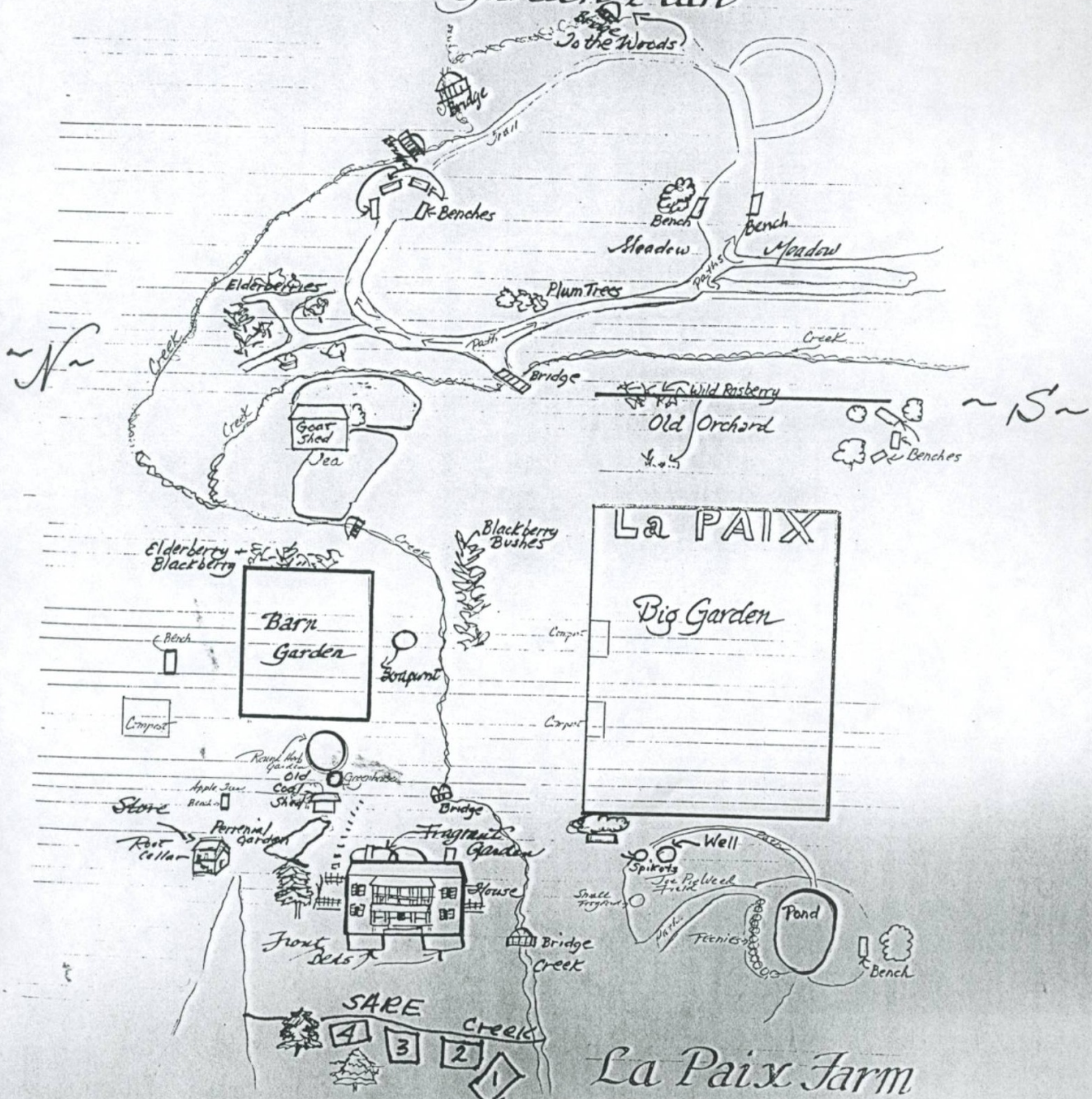
Three deer deterrents were proposed to ascertain whether these organic, non destructive methods would keep deer from eating tomato plants. They were a tansy hedge, rose scented geranium bushes and blinking Christmas Lights each around a 10' by 12' plot of organic tomato plants (6 plants in each plot). Deer damage was first noted to each of these plots (including a control plot) exactly eighteen days after installation. Undeterred by this failure, the grantee labored on with new ideas. A second trial was conducted with plastic flats laid around the tomatoes, pink netting saturated with scented rose geranium essential oil around a second plot, and mylar strips enclosing a low bamboo fence around the third plot. Deer damage ensued within 8 days for the scented geranium, nine days for the plastic flat trays and seven days for the fluttering mylar strips. Again, spurred on by obsessive perserverance, a third trial was enacted. A tent of chickenwire, a Web Site of filament line and a Chickenwire drape were observed for deer daliance. Three plants in the Tent of Chickenwire were eaten in 10 days, while three lived on for a month encased in chickenwire and still mysteriously were devoured, the Chickenwire draped over tomato cages lasted another 14 days, and the Web Site lasted 15 days. Another experiment, conducted seperately, involving a cage canopy with bells, wind chimes, dangling ribbon and raffia was successful in the Big Garden.

A Deer Diary was kept of observations and comments during the duration of the project. In addition, photos were taken, as well as drawings made of the various experiments.

There are some conclusions to be reached from this research, and some prospects for continued experimentation. See Conclusions part of this report.

~ E ~

Overall Garden Plan



~ N ~

~ S ~

~ W ~

La Paix Farm

- 1) Christmas Lights / Plastic Tray / Ten
- 2) Control
- 3) Sealed Geranium / Net / Chicken Wire
- 4) Tansy / Mylar / Web Site

La Paix Farm

*Organically Grown Herbs,
Sophisticated Produce & Related Crafts
Workshops, Tours & Shop*

*Myra Bonhage - Hale
HC 64 Box 17
Alum Bridge, West Virginia 26321
(304) 269-7681*

DEER DIARY

Myra Bonhage-Hale, La Paix Farm, Alum Bridge, West Virginia

June 7, 1997: PLOT COMPLETED. Rick Workman came to complete the Tomato Grant plantings. I helped during the four hour period by selecting the largest scented geraniums to plant, supervising setting up the scented geranium essential oil cages and finally in late afternoon I laid the 13 bales of hay around the plots.

I got the scented geraniums from Faye Brawner, world's largest scented geranium selection in Buckhannon West Virginia, on the previous Wednesday.

I need to put more hay on plots, between the plots for clear delineation. At least 2 feet - Allow for planting on periphery of plots - at least one foot, so that there are 3 foot paths.

Suggestions for setting up three experimental plots, one control plot for research project:

1) Select tomato area (each at least 12' by 10') the Fall before and transplant large tansy after they have flowered so that a hedge at least 3 feet high is in place at the time of planting tomatoes.

2) Scented Geraniums: Use large ones and they might be planted in 1-1/2' high pots for added height.

3) Add scented geranium oil to colorful strips of netting and hang from tomato cages.

4) Leave grass paths between paths for clear delineation.

5) Allow at least 20 hours to set up four plots - with tomato plants, peripheral plants etc., 30 hours for whole deal.

June 11, 1997: 8:15 p.m. Deer seen around tansy plot - seems to be eating grass on edge. One small deer. Did not see me from front door - then looked up - alert - heads up! - then down - moved west toward grass.

Deer seems more interested in grass west edge of plot Doe scratched head - looked toward east. Behind pine, moved south toward creek. Doesn't seem to notice lights on 3rd plot. West- eating grass.

Doe medium size in front of plots (east) of plot grazing on grass. Spooked by Deer Crossing sign!! Startled, leapt and ran. Was it the same skinny doe as before? Meandered away toward willow by creek. Over creek (south) on other side of willows. In the last two nights I have seen one doe on either side (east, west) of 4 plots - I examined tomatoes tonight - no damage.

June 13, 1997: One doe about 30' back of plot, walking regally.

June 16, 1997: Made sign for SARE PROJECT. Viewing it at 8 p.m. Saw doe in upper hill (north) Left quietly. Later, 8:20 p.m., dogs in house - deer in upper meadow, north again.

No damage to tomatoes yet.

Attempted to put "Bubble of Light" thought form over Big Garden (Protection from deer etc.)

June 17, 1997. Inspected Big Garden for deer damage - deer ate down Joe Pie Weed, Irish Eyes Rudebeckia, (a first) and tomato plant & !! fleabane (a first). Seems as if they are defying me!

5 p.m. June 17: No damage to any tomatoes in any bed in SARE Project plots.

June 18, 1997: Helper, Nick put pots of Tansy around Tansy plot to fill out hedge. Distributed rest of hay. Affixed sign for SARE PROJECT (see photo)

June 19, 1997: 4 p.m. No damage to any of tomato plots in SARE project. But my own Big Garden (with double electric fence) deer have eaten or nibbled Joe Pie, Jewelweed, potatoes, tomatoes, beans, zinnias, phlox, Ox Eye daisies, fleabane, rudebeckia, Lady's Mantle, chrysanthamums, horse lettuce.

Scented Geranium essential oil renewed on pink net on each of six tomato cages in Scented Geranium plot - I think essential oil I had on hand is old and not so potent, so have ordered new (at \$40. for 8 oz.!) Took photos of plot.

June 21, 1997: All plants in Grant plots fine, no damage.

June 22, 1997: 6 a.m. One deer front and one deer back of SARE plot grazing on grass. Tomatoes growing well, some 1-1/2' high now. No damage.

June 23, 1997. No damage SARE plots. Deer everywhere.

June 24, 1997: Deer to south of plot 7 a.m.
6 p.m. 98 degrees. No deer damage.
SEVENTEEN DAYS WITH NO DEER DAMAGE.

June 25, 1997: 8:05 p.m. Big Deer in back (west) of plot.
8:20 p.m. Deer in front (east) of plot. Camera jammed and couldn't take photo. Fixed camera. Took two deers in flight. (See photo in Appendix)

June 26, 1997. 7:20 a.m. DEER DAMAGE. Half or more plants nipped/eaten.

Christmas Lights: five out of six eaten/nipped.

Control: five out of six

Scented Geranium: five out of six

Tansy: five out of six

Photos taken. Rose Geranium essential oil applied again.

TOMATOES WERE UNTOUCHED FOR EIGHTEEN DAYS.

Deer Calling Card (Ousize) between Control & Christmas Lights beds.

June 27, 1997: One whole plant left in each plot.
9 p.m.: Deer & fawn nursing back of plot (west).

June 28, 1997: One untouched tomato plant left in each of four plots.

June 29, 1997: Same as 28th.

June 30, 1997: TC Jim Gardiner - SARE. UNIVERSITY OF VERMONT
Discussed other means of deterring deer. Agreed to:

1. Put tansy branches over tomato cages in Tansy Plot.
2. Augment material around Scented Geranium with more essential oil.
3. Put plastic trays around periphery of Christmas Light Tomato Plot.

July 1, 1997: Torrential rains upon awakening. Examined tomatoes. ALL NIPPED except one in Christmas Lights plot.

1. Put plastic trays (flats) 2 deep around Christmas lights plot, held down by rocks.
2. Put netting saturated with Scented Rose Geranium over cages in Scented Geranium plot. Got ^{new} essential oil on skin of arm - caused welts and itching. BE CAREFUL USING ESSENTIAL OIL OF GERANIUM (ROSE SCENTED).
3. Put fresh tansy branches over Tansy Plot, 1 right on top of each six inch plant (nipped down previously to this height by deer) and 1 branch laying across 1st horizontal bar of cage.

Found mylar seller - will order per Jim Gardiner's suggestion.

7:57 p.m.: Deer in back of plots. Deer in backyard by Perennial Border (see map of farm gardens enclosed for orientation). I told the deer I loved it and please respect my plants. It darted into the woods to the north.

July 3, 1997: 8:44 p.m. Deer #1 in Control Bed eating. Deer #2 appears - browses around Tansy Bed - Startle response and gone. Deer #3 (younger) and Deer #1 in Scented Geranium plot?? Then thru Tansy Plot together. Deer #1 checked out Christmas Lt/Plastic Tray plot - did not enter.

July 4, 1997, 7:15 a.m. - went to plot to see damage of three deer last night. SURPRISE! 1) No damage to Christmas Lights/Plastic flat tray plot. 2) New parts of tomato plants missing in Control Plot. 3) NO DAMAGE to netted Scented Geranium plot. 4) Tansy plot wrecked. Will replant with larger potted tomatoes I grew from seed that I saved for this possibility. Will put Mylar around plot later this week.

July 5, 1997: 7:50 p.m. From upstairs porch observed four deer (fawn with spots) browsing north of plots by roadside. Seem content.

July 8, 1997: Big (Pruden's Purple) tomato left in Christmas Light/Plastic flat plot. Tomatoes better off - only one re-bitten in that plot.
(2) Scented Geranium being eaten! Plants nipped (3). Un-nipped (3). Tansy Plot devastation - 4 tomatoes not salvageable. Put in four more tomatoes 2' high I had in pots - some with

small tomatoes and flowers - Adjusted plastic flat trays closer to plants in Christmas light plot - left lights on though can no longer be considered a deterrent.

In tansy plot put strips of mylar on each cage (6-8) and with helper Kathy put 3 foot bamboo fence around tansy (growing nicely - at least 2-1/2" high) Put two mylar strips each 1-1/2' space. Eye appalling to look at in hot sun and breeze. Nick also helped construct fence around tansy plot. Photos taken.

July 8, 1997: 8:30 p.m. Backyard - watched deer in meadow below pond. Heard startled deer noise - went to front door - Large doe (?) looking at mylar jungle - Up - Back - Over shoulder x 5 - then to it - then turned and leapt over creek to south. It does look TRULY WIERD & AWFUL - REALLY TACKY. No wind as earlier - catching strips - tossing them and sun light catching them truly eye piercing. What about night??????

8:54 p.m. 3 deer came from creek (south) mylar still - deer to west - not looking at plots.

July 9, 1997: No damage to any plots except Control which is almost empty.

July 10, 1997: No damage to plants except control. GROWING! AGAIN! New tomatoes in mylar/tansy plot untouched. Repaired mylar fence which came down in thunder storm yesterday.

July 11, 1997: 2 FAWNS ON SOUTH HILL FROM TOMATO PLOTS at dusk. Large doe to north of road by plots.

July 12, 1997: No damage.

July 14, 1997: Deer to south p.m.

July 15, 1997: Deer to south p.m.

Walked within 20' of deer before it ambled away via west side of plots. Four out of six plants in Christmas lights/plastic tray plot eaten. Zero left in Control. Two out of six bitten again in Scented Geranium netting. Two with least netting covering were bitten. Tansy/Mylar plot: four out of six including tops of all four new plants bitten. NEW PLOT DETERRANTS LASTED 8 DAYS.

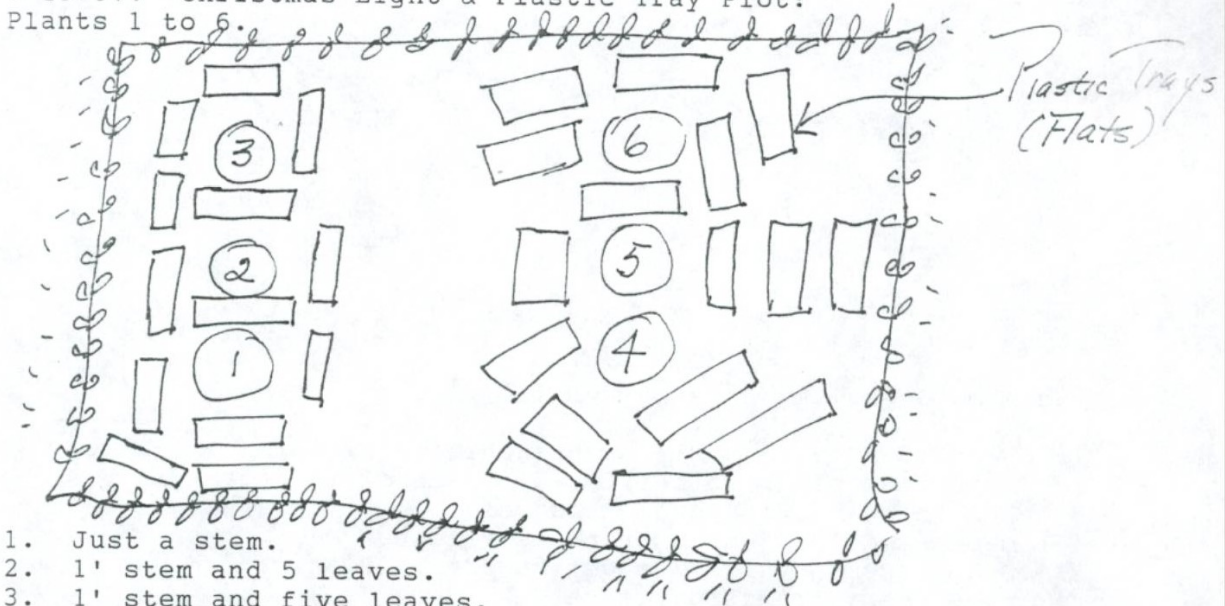
July 17, 1997: TC from Jim Gardiner, SARE U. of Vermont. re: budget. I told him I had already bought 1) Clear fishing line to put around 1 plot. 2) chicken wire on ground around plot 1 (turned off Christmas light as no help). Dr. Gardiner suggested spraying tansy decoction and rhubarb decoction

on 3rd plot. Took photo as is. Control plot almost nothing now. Also took photos of my tomato in picket fenced-in yard around house. Deer there had stuck tongues between pickets and eaten stems and leaves. Put chair, umbrella and basket as deer guards. Also put chicken wire around entire outside of fence behind tomatoes. This pretty much took care of problem for summer except for a few tomatoes which grew higher than four foot fence and through chicken wire. These also got nipped.

8:45 p.m. (7-17-cont.) Watch 2 does and 3 fawns (somebody had twins) by Plots (west) from south bank of creek. Fawns gamboled around kicking back legs up before running madly around - doe put head under lights and ate plant n.w. edge over a hay bale. Fawn gamboled - 1 doe to north as 1 doe and 3 fawns leapt over weeds in stream bank - most were eating grass to west of plots.

7-19-97: Christmas Light & Plastic Tray Plot:

Plants 1 to 6



1. Just a stem.
2. 1' stem and 5 leaves.
3. 1' stem and five leaves.
4. 1-1/2 stem and 6 leaves.
5. 2' stem, 2 leaves.
6. 6" stem, 7 leaves.

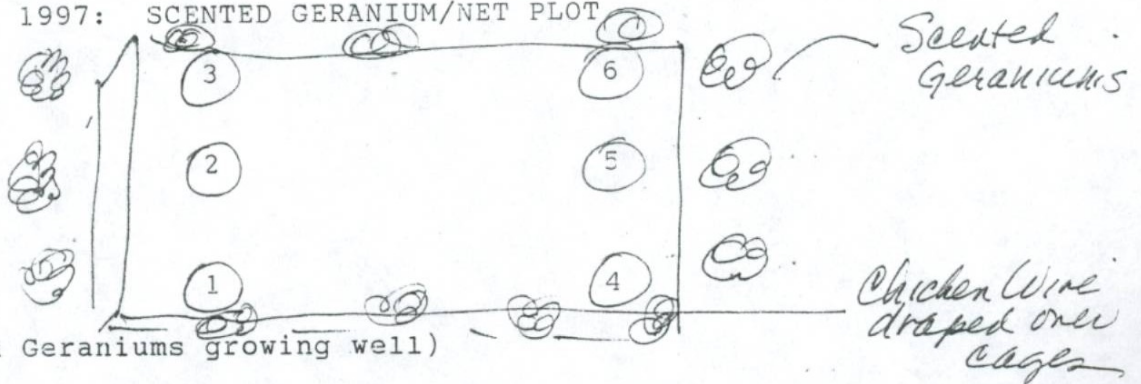
July 19, 1997: CONTROL PLOT
Tomato plants 1 through 6.



*Tomato Cages
Only*

1. 2" stem
2. 3" stem, 4 leaves
3. 5" stem, 6 leaves
4. 3" stem
5. 0
6. 2 branch few leaves, 1" stem.

July 19, 1997: SCENTED GERANIUM/NET PLOT



(Scented Geraniums growing well)

1. Main stem eaten to 1', 3 branches w/leaves
2. Main stem eaten to 1-1/2', 4 branches, 1 large w/leaves
3. 2 main stems 8" long, 2 leaves
4. main stem 1', 5 or 6 branches w/leaves
5. Draped completely w/ sheer curtain. Plant to top of cage, many branched, leafed.
6. Eaten to ground.

July 19, 1997: TANSY/MYLAR PLOT



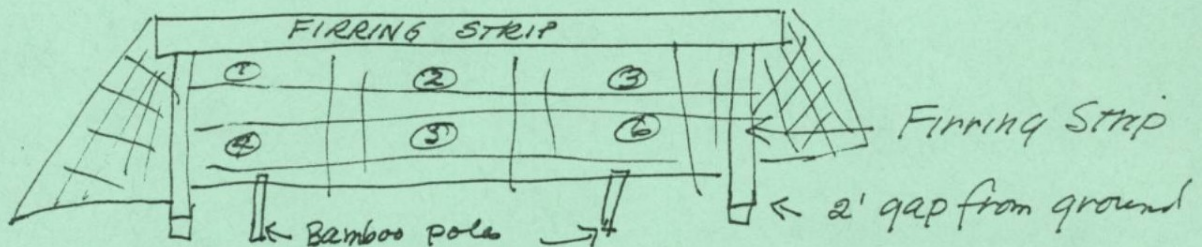
1. Stem 3' high - stripped
2. Eaten down to 12"
3. Eatend down to 1-1/2"
4. Dona tomato, 3' high no leaves except at bottom.
5. 3-1/2' high, 2 nibble to top
6. 1-1/2 high 3 branches, some leaves.

July 20, 1997: Sunday. Kathy, Nick and I reorganized Deer Deterrants. I had bought filament line and chicken wire previously and brought it home by car.

Tansy/Mylar Plot: 1. Took out mylar from bamboo fence previously erected. Removed mylar from tomato cages. Took out horizontal bamboo from poles. 2. Kathy wove filament like a spider web thru 6 cages and to fence and twice around fence affixing with electric tape. Took 2 people 1-1/2 hour each. Kathy did get in the middle of what was renamed THE WEB SITE and couldn't get out. Horizontal bamboo was removed as it was thought that the invisibility of the filament would spook/startle/befuddle the deer. P.S. Kathy did find her way out, carefully.

Scented Geranium Plot:¹ We planned to put 6' wide 2' high chicken wire around the following Thursday. Until then, we draped chicken wire over the cages.

Christmas Light/Plastic Flat Tray Plot:² Took out plastic trays and Christmas Lights. Arranged Furring Strips like a TeePee or a Tent (see diagram). a. Put furring strip in middle of 12' (2 - 6') chicken wire. Stapled together. b. Put furring strip (8') on edge of each side. c. Draped chicken wire over furring strips. 2-1/2 hours, 3 people. The chicken ^{wire} came down to within 1 - 1/2 feet of ground on each side.



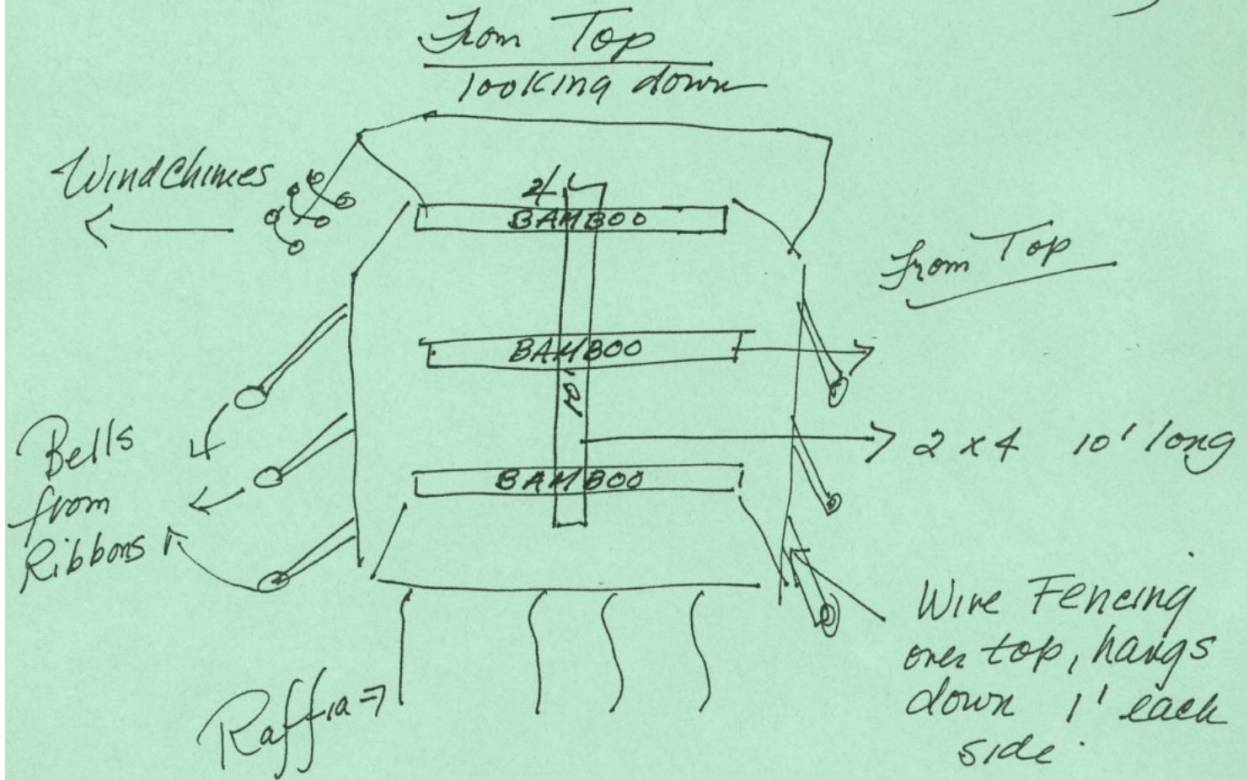
Took photos and slides. The front and back of Tent Cage were tied shut.

Big Garden: Due to success of Chinese type covers over much eaten flowers after one month, more copied as follows: The Double electric fence was not working and squash was eaten to ~~group~~ ^{ground} the week before. See diagram next page.

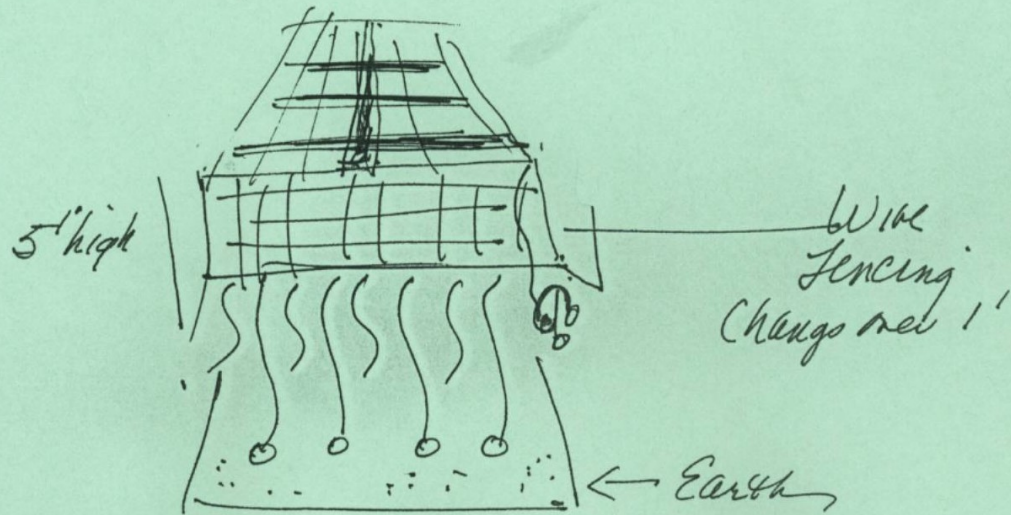
¹ By now, I was rather paranoid about the deer, and thought they might be spying on us. On this date, we looked up toward the edge of the woods (north) and the doe and two fawns were watching us almost the whole time we plotted.

² Laying the chicken wire on the ground was vetoed because all of us were concerned that the fawns might get their hooves caught.

Chinese Wedding Cages: Big Garden



From Front



NOTE: The idea of spraying leaves of tomatoes with either tansy or rhubarb leaf decoction was also vetoed because I was afraid I might poison the deer or poison an unsuspecting child/person picking the fruit which was in the front yard. And, what would be the real difference between that and pesticides/herbicides?

BIG GARDEN (OVER THREE SQUASH BEDS) 7-20-97:

1. Cut 3 furring strips (10' long)
 2. Cut 6 furring strips (4' wide)
 3. 12 4' bamboo poles.
 4. 6 furring strips (5' high)
 5. Chicken wire to cover over, leaving 2' high from ground.
- Approximate cost: \$5. chicken wire, furring strips \$2.,
bamboo \$.50 each cage.
- Time spent: 15: 1 person, 30" 2 people.

Still 7-20-97, 7 p.m. Writing this Deer Diary on front porch, doe (young and fawn) came out of woods - watching me - I looked. They wagged tails (above pond south of back yard) They saw something to west - spooked - doe snorted - to the woods - I copied snort, but I know I don't scare them anymore.

Still 7-20-97, 8:15 p.m. 3 doe* 1 fawn with spots west of new filament spider WEB SITE Plot (Old Tansy/Mylar) schmoozing - grazing on grass (but I know they're checking out my WEB SITE! can't see from front door for tansy hedge) - they emerge east back of Scented Geranium/Draped Chickenwire plot - grazing - this is smaller fawn than usual - may be different from previous three.

*Fawn seems new.

8:30 p.m. Doe back of chicken wire Tent looking, grazing. Does head near edge (north) of Tent, look around - wags tail - goes by - slowly - wagging tail. Fawn more to west now nearer Tent. They will have to crouch and crawl to get to tomatoes in Tent - fawn wags tail and pauses back of Tent - goes on toward doe - joins her at edge of creek still grazing.

Two new deer to north of road ~~walked~~ west of plot (WEB SITE) Other deer in back walking fast back of Scented Geranium/Chickenwire plot, then back to Tent Plot. Small fawn still on edge. One deer looks north - grazes. Other deer by creek edge of weeds, I think they're all spies! Looking sideways at new Deer Deterrents. Now another fawn and doe. Deer puts head under Chickenwire Tent. Highest place off ground is 2'. Grazing behind pine. west of Control bed. Deer further west 20'. Deer west of Scented Geranium/Draped Chicken Wire Plot.

July 21, 1997: No further damage.

8:05 p.m. 1 doe, 1 fawn west of plots.

8:45 p.m. - 2 does, 2 fawns east of plots within 30' of front door. Fawns growing fast or are they different fawns? 1 doe to sign SARE.. but still grazing grass on east edge. Now 4 adult deer and 2 fawns, 2 adult, 1 fawn swarm onto Control Bed. Eat - then to Scented Geranium/Draped Chickenwire - deer puts head sideways under cage to get tomato - chickenwire over plants does not deter - 1 fawn eating Scented Geranium. Looking at Tent. No attention seems to be paid to Web Site. Fawn seems to be under Tent - maybe not. They leave, exit west. 1 Black faced doe and black faced fawn wander through at 8:55 p.m.. Fawn has lots of spots. They wander by Control Bed but do not stop.

July 24, 1997: Inspected Tomato Plots:

1. Tent: Big buck scat to east and 1 corner down -no damage-I have theory that buck ducked head to get Pruden's Purple tomato and tent side fell on head and he pooped!

2. Control bed almost nil.

3. Scented Geranium/Draped Chicken Wire: Altho I thought deer were there by observation at dusk - plants are undisturbed and growing again with chicken wire draped over all 6 cages.

4. Big strange (dog???) poop in middle of Web Site. No damage to tomatoes which are re-growing. Scat does not seem to be deer, raccoon, rabbit - could a dog have snuck under and why????? Bear seen on farm west of me (400 yards or so).

8:20 p.m. Big Deer just west of plots.

July 26, 1997: 8:30 p.m.: 2 Deer west of plots. No damage!

July 28, 1997: Long discussion with Jim Gardiner - told him why I didn't use Rhubarb leaves decoction. Explained new trials. Still thinking of using Newt Gingrinch all night radio talk show which is working for MSOGBA Organic Certification Coordinator, Sue Cosgrove.

July 29, 1997: Tent Plot: Pruden's Purple on edge eaten. I pulled 1 edge of Tent over it. All others growing well.

2. Chicken Wire/Sc.Ger: Chicken wire overhung east edge plant eaten. All others OK.

3. WEB SITE: All plants growing well, even 1 almost gone, 8 days ago.

From July 30, 1997 to August 4th I was in Vermont at the Annual Conference for the National Society of Dowers. My son, William Nicoll Hale, III house and garden sat for me. He continued a daily journal of changes in the SARE plots.

July 30, 1997: Tent: One plant far right almost finished. All others OK

Control: Chewed up.

Draped chicken wire: Right chewed. others undamaged.

Web Site: Undamaged.

July 31, 1997: Tent: One plant far right still looks bad. All others OK

Draped: OK

Web Site: Undamaged.

August 1, 1997: Tent: Complete devastation. All but 2 on right in the back are damaged.

Control: Complete devastation.

Draped: Chewed up almost completely.

Web Site: Undamaged.

August 2, 1997: Tent: All 3 on left side complete devastation. Front right is half way chewed.

Control: Complete devastation.

Draped: All 3 on left completely devastated.

WEB Site: OK.

August 3, 1997: Tent: Same. Front Right a little more chewed up.

Control: Still devastated.

Draped: All 3 on left chewed up Front one on left even more chewed up.

WEB SITE: Just fine. I think this might work. I see NO damage to far right bed.

August 4, 1997: I returned from Vermont. Bill was very enthusiastic about Web Site.

Tent: Chicken wire- all tomatoes but Pruden's Purple gone. I lowered wire all around to ground.

Control: Gone

Draped: same as August 3rd.

Web Site: Loose filament southwest side.

All tomatoes chewed up.

Is it a ground hog?

August 15, 1997: Called Bruce Lloyd, Extension Agent, to view and inspect.

August 16, 1997: Saw 2 fawns grazing by periphery of plots near Tent.

August 19, 1997: Tent: All tomato plants growing. Pruden's Purple 3-1/2' high. Deer poop all around. 1 tomato has flowers.

Control: 0

August 19, 1997 continued

Draped Plot: 1 tomato outgrowing curtain - smashed down.
Eight scented geraniums growing, others eaten.
All other tomatoes chewed up as net shifted
Little left.

Tansy/Mylar /Web Site: Web Site up - flowering tansy looks
good: Most plants eaten down hard to figure
out how deer got in. 1 chewed plant is 4'
high. Chewed on bottom. Could it be a ground
hog instead of a deer?

August 21, 1997: Bruce Lloyd, Extension Agent, Lewis County,
visited and viewed all attempts re: deer deterrants including
Big Garden in back. (see map of farm)

Tent: Tomatoes growing well again.

Control: gone

Draped: 1 OK but dwarfed

Web Site: a puzzle

Big Garden: Nothing worked but first two Chinese Wedding
cages (see diagram page 5-9). There only one Nicotinia
flowering plant nipped on one leaf. Rest OK. Could be
that combination of wierd look plus bells and wind chimes
being rung by deer touching cage is an interesting combination.
The three new cages did not work. All eaten. See list
of plants eaten

Bruce looked at the once bountiful garden and said, "It
looks like the deer are playing games with you."

September 14, 1997: As workshop guests leave in twilight,
deer in SARE site startle and run. But one deer in the
Web Site looks, lifts its leg out of the Web Site carefully
over the filament line, and then gallops away. AHHHHHHHHHHH!

10-02 and 10-03-97: With help of Kathy, began to take SARE
site down. Decide to leave tansy (which is also now being
eaten). Only thick stalks of tomatoes are left on the 3
SARE plots. Weeds grow out of the holes left by the plants
in the CONTROL plot. It has been heart rending to have
grown these plants from seed and to watch them going through
slow torture all summer. The deer are turning darker now
and the fawns are half grown.

10-07-97: Finished typing up the Deer Diary. Have analyzed
myself as PTDD (Post Traumatic Disney Disorder) or a Bambi
Victim. How can I live with the deer and have a garden
too? This is what I have tried to do all summer, and all
I have left is the deer. What to do? What to do? Next
year: Sue Cosgrove's pepper spray, peripatic fences, garden
rooms, and Newt Gingrinch, all night talk show tapes with
Sensor lights? I'm thinking. But so are the deer.

No. of days before deer damage

Deer Deterrent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Deer Deterrent																				
1. Christmas Lights	[Solid black bar]																			
1. Scented Geranium	[Solid black bar]																			
1. Tansy	[Solid black bar]																			
2. Scented Oil Netting	[Solid black bar ending at day 8 with a checkmark]																			
2. Plastic Flat Trays	[Solid black bar ending at day 10 with a checkmark]																			
2. Mylar Strips	[Solid black bar ending at day 7 with a checkmark]																			
3. Tent of Chickenwire	[Solid black bar ending at day 20 with a checkmark and '3*']																			
3. Chickenwire Drapes	[Solid black bar ending at day 14]																			
3. Web Site	[Solid black bar ending at day 15 with a checkmark]																			
1. Control	[Solid black bar ending at day 18 with a checkmark]																			

1. 1st trial

2. 2nd trial

3. 3rd trial

* All eaten down by mid Sept.

CONCLUSIONS

1. In a new site to deer (a place where edible vegetables have not been grown before) it will take longer for the deer to realize that edible food is available.

OR

2. The deer wait for a vegetable to be big enough to eat before they indulge. Fruiting is not a pre-requisite for edibility.

3. After finding that veggies are growing in a site, new deterrants work for only half the time the original deterrent on a new site worked.

4. If a means of changing various deterrents every 10 days or so could be devised which was not time or money prohibitive, this might work. I would like to try portable fences on wheels enclosing small areas (fences about 5-1/2' high). Various sound, startling devices could enhance the fence.

5. A combination of sudden light, triggered noise, moving material, and hard to see barriers might be tried. I am interested in the concept of light/movement sensors, particularly if they would mimic a deers tail of alarm.

6. The problem of deer invasion not only in West Virginia but around the country seems to be growing exponentially. The lack of deer predators is one cause. Another is the lack of habitat. Like all environmental problems, a fine balance has been lost, and is difficult to regain by man's continued intervention, however well meant.

7. Electrical fences are hard to maintain, and almost impossible to monitor, as well as very expensive to install.

8. Deer are quite adaptable in their cuisine. I rue the day they savor basil, sage, mints and thyme.

9. Perhaps a deer birth control veggie could be found.....

Lewis woman gets grant for deer foil

By PAM MARRA
Staff writer

Imagine a yard filled with blinking Christmas lights, rose-scented geraniums and Tansy herb branches. A decorative holiday scene?

Not in this case.

The items are really part of an experimental deer foil and will actually be implemented in the heat of summer

Myra Bonhage-Hale, owner of La Paix Farm in Alum Bridge

(Continued 6-A, Col. 5)

Lewis woman

Lewis County, and the first woman to have a farm certified organic in West Virginia, recently received funding for a grant she compiled. It's titled, "Christmas Lights and Deer Scents."

"I started my grant proposal by saying, 'Deer are a great problem to many organic farmers, leaping fences in a single bound, and generally defying laws of fences,'" Bonhage-Hale says, adding, "The deer are in everything here and I'm just really frustrated."

Frustrated, but not without a sense of humor about the matter.

"They even jump the electric fence I have. Apparently they've taught each other it's not going to hurt that much."

"I try to do the 'live and let live' thing, but on the other hand, when you're growing something from a seed and you're trying to sell it, it can be upsetting that the deer - who have no plans of growing anything for you - come and eat it up."

Bonhage-Hale says she came up with the ideas to write the grant after receiving suggestions during two "Herbal Getaway" conferences.

"I was talking to a DNR person who gave me the idea for the lights. They have to be five feet off the ground and they have to be blinking."

"Apparently you can make a gestalt and this can fool the deer. If they think there's something there, they can be fooled. It might work and it might not. Anything keeps deer away for three days. After that, they seem to figure it out."

As for the geranium plant

(Continued from Page 1)

idea, she says, "They're pretty pervasive. To me the scent is almost repugnant, too rosy. That might really put the deer off. But I really have more faith in the Tansy branches."

She explains that she has used Tansy in the past on her tomato plants and it worked extremely well - until the plants outgrew the cages.

"And then, here came the deer, devouring the plants that were extending beyond the cage."

Bonhage-Hale explains that, though Tansy is poisonous to deer, "They never touch it. It's like they have some kind of genetic coding. And I'd never, ever do anything that would harm them in any way."

Her experiment will consist of five contiguous plots of the same kind of tomato plants located in the front yard of La Paix Farm.

"We will see how - and if - they (the plants) survive. Then we will take a weekly survey of deer damage, take photographs and report on it. It would be so wonderful if something like these simple ideas worked."

Participants who come for tours and workshops will be able to see the results of the research, which will also be published. Others may view the plots by calling La Paix.

La Paix is a small herb and produce farm using solely organic methods of growing; no herbicides are used.

Funding for the grant is being provided by the Northeast Region Sustainable Agriculture Research and Education Program (SARE) Farmer/Grower Grants Program.

In 1997, at La Paix Farm, the deer ate:
echinacea (purple cone flower), horse lettuce, Joe Pie Weed,
Agrimony, St. John's Wort, Lamb's Quarters, Lettuce, Kale,
Corn, Tomatoes, Squash, Beans, Celosia, Grain Amaranth,
Ironweed, Willow, Hollyhocks, Hibiscus, Calendula, Bee Balm,
Lilacs, Butterfly Bush, Hydrangea, Poke Weed, Jewelweed,
Day Lilies, any lilies, rudebeckia, phlox, garlic chives,
angelica (ate it down 6 times and killed it), Hyacinth
bean, clematis, roses, yarrow, sweet potatoes, potatoes,
Lady's Mantle, , elderberry (all gone now), grapes, apples,
peaches, pears, chrysanthamums, hostas, pansies, heartease,
blackberries, raspberries, zinnias, cosmos, asuratum, , astilbe,
salad burnett, parsley, cilantro, greater lobelia, lesser
lobelia, salvia, wormwood, Smoke bush, etc.

Hops

peppers

Marguerite

Scented geranium

ornamental corn

Paw Paw tree

Mint by creek

witch hazel

Tomato

Yasturums
Broccoli

In 1997, at La Paix Farm, the deer didn't eat yet:

Basil, thyme, sage, marigolds, chives, garlic, onions, wisteria, anise hyssop, ~~tansy in Big Garden~~, catnip, Rosemary, mints, lavender, smart weed, gill-on-the-ground, lemon balm, dianthus, mugwort, sweet woodruff, ribbon grass (although they slept in it and mashed it down), Lamb's ear, Iris, motherwort, strawflowers, asparagus, Greek oregano, sweet marjoram, lemon verbena, Bay leaf, plantain, , fox tail, quick weed, purslane, peonies, foamflower, pipsewa, wintergreen, wingstem, vinca, perilla, lavender, ornamental grass, mallow, Nicotintia, lemon balm, green Amaranth, scullcap, Silver King & Queen artemesia, Artemesia annua, southernwood, milkweed, mullein, foxglove, dame's rocket