



Neo-Terra
Experiments in Healthy Living

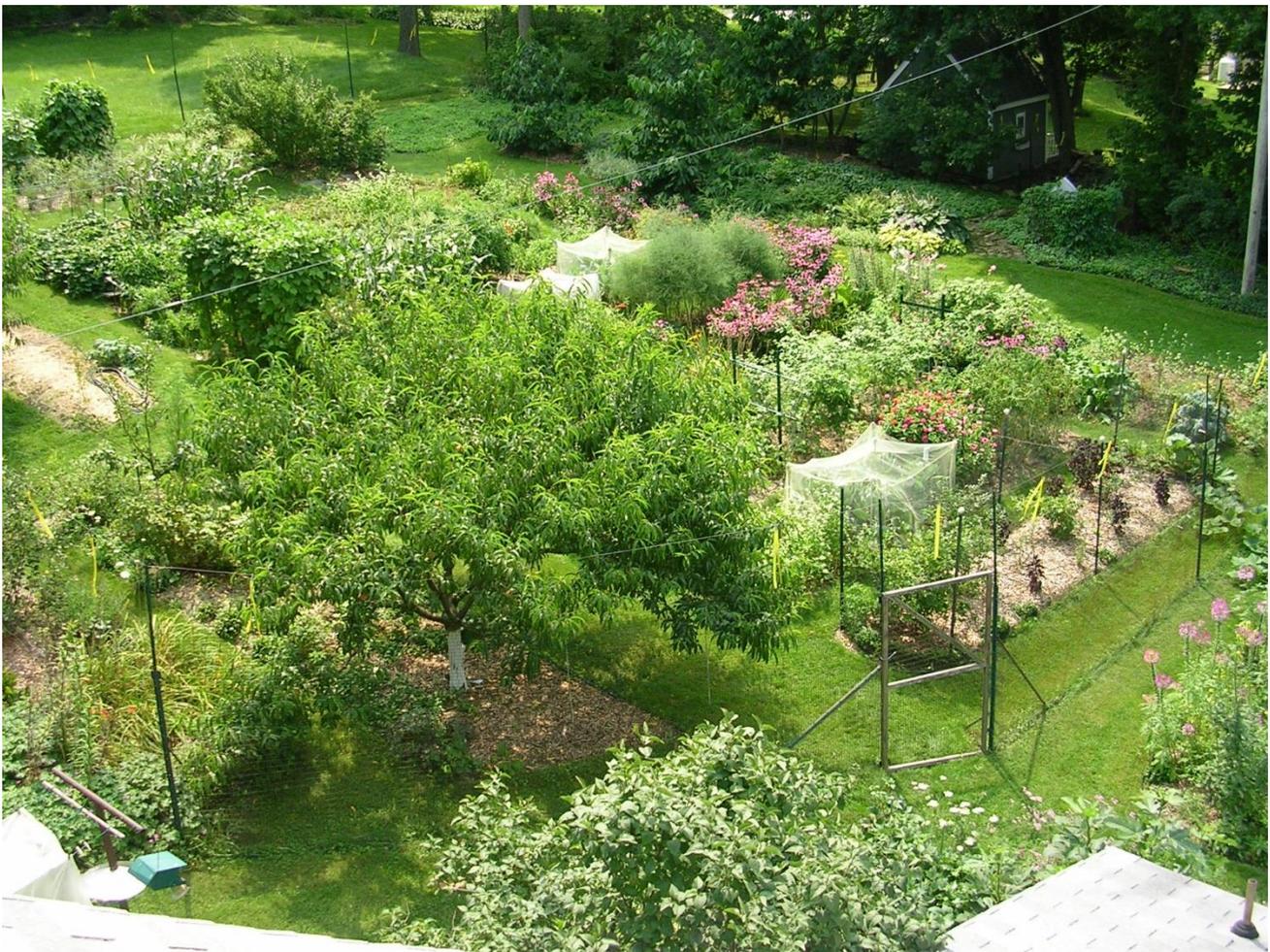
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Fall Equinox, 2014

Following is a picture report of our garden for this summer.

OVERVIEWS

We start with the view from the roof. The peach tree, left center, obscures part of the garden. A second peach tree is off the picture to the left.



The following captures a large part of the enclosed area, which is 100' x 100'. Outside the view to the left is our spring garden, which contains three paw-paw trees (which we will show later). We will also zoom in on specific parts of the garden below. On the house, for the summer months, we've covered two of the four hot water collectors on the roof, and the hot air collectors on the back wall.



Here is the view from the house looking toward the garden.



GARDEN DEVICES

We continue experimenting with ways to improve yields through use of trellises (horizontal and vertical), reduce damage from insect pests, and control diseases. These have the added advantage of reducing our labor. Below is an overview of four devices. From front to back these are: tulle cage over new beets, horizontal onion trellis, metal bins for burdock to raise soil level for this deep-rooted crop, and pea trellis which covers a bed of 600 pea plants in a 5' x 8' area. This shot also shows the extensive use we make of cover crops. Our workhorses are combinations of oats, vetch, winter wheat, barley and fava beans in the cold months, and buckwheat and Japanese millet in the summer. We've had good luck with berseem clover in the spring and fall, which we tried for the first time last year.



Tulle is flimsy and after two years breaks down under UV. This year we're trying tutu cloth, a thicker weave, on our beets, against the beet miner fly. Below Tania stands behind the new tutu cage for beets (left) and the two-season old tulle cage on collards (against cabbage moth), already showing holes and tears from UV and physical damage.



We do similarly with brussels, also against cabbage moth (below), but have noticed that aphids infest the lowest leaves early in the season, as predators cannot get at them. I raise the sides of the cage, pull off those leaves and then spray the plants with water. We're moving from wooden to metal poles (emt – electrical metal tubing) as wood rots quickly in our wet clay soils. In front of the bed are eight Borghese and Stupice drying tomatoes. Leaf lettuce pokes up behind Sweet William. Our blueberry bed is to the left, and raspberries to the right.



We fast forward to Gene halving the Borghese tomatoes prior to drying:



Two years ago at a PASA talk we followed the results of investigations carried out by organic ag faculty on cucumber beetle damage to cukes. Turns out that the beetle infects the plants causing wilt through the feces they deposit on the flowers. The bacteria travels down through the flower to the rest of the plant and quickly causes wilt. Solution: cover the plants for 10 days at first flower, then remove to allow pollination. We had our best year up to that point last season using this procedure, and surpassed that this year with a bumper crop, whose last cukes we picked on August 29th! We put up 17 quarts of dill pickles using lactic fermentation. From a Darwinian point of view, it is difficult to understand why the beetle would so damage its host in this odd way. As academics say, "further research is required."

We grow pole beans for fresh eating and drying – 16 poles in two separate beds. Here is Gene holding a recent pick. Behind the beans are carrots, peppers, and sweet potatoes. We use horizontal trellises on the peppers to keep the laden plants erect, and on the sweet potatoes to prevent vines from touching the ground and rooting, which may produce potatoes, but really small ones, robbing the main crop.



Over the years we have noticed more bugs in our yard, pests and beneficials. This year we saw a decent number of wheel bugs, a great predator of Japanese beetles and other pests. Here is one on our Crandall currants. It is rather distinctive, in case you haven't seen it.



We accept a certain amount of damage, realizing that without prey our beneficials could not survive. On the other hand, certain pests can quickly defoliate a fruit shrub because predators do not exist in sufficient numbers, or cannot respond quickly enough. Taking sawfly larvae on gooseberries for example, we resort to pyrethrum on outbreaks. We use pheromone traps for oriental fruit moth on peaches and apple codling moth on apples. Emerging new pests are SWD (spotted wing drosophila) and the Brown Marmorated Stink Bug (BMSB). We have used sonic repellents with good success to prevent vole damage on carrots and beets, which has been severe in some years, and small live rodent traps. When desperate, we use snap traps baited with peanut butter.

Chipmunks and birds love strawberries; against these we use bird netting. Our innovation here is fastening the bottom of the netting against plastic edging with 1 x 2" strips, making the bottom edge secure. To pick, we fold the netting from the top down. Note also the mature peas in our trellis, seen in an earlier stage above. The trellis collapses for storage.



Our gooseberry and currant crops were the best ever, enough for fresh eating, freezing, and berry crepes:



Against birds on blueberries we use netting arranged as a cage. We had to replace two of our six bushes this spring. We suspect damage from invading roots from our neighbor's black walnut tree, which are also infecting our Borghese drying tomatoes, visible in the right edge of the photo. One approach may be to install a long and deep root barrier at the foot of both beds, a temporary measure that will buy some time.



Deer, skunks and other rodents began eating our ripening grapes a few years ago. The first year this occurred we went for a week without noticing the damage, and lost most of our crop. Now we surround the vines with deer fencing (below).



With our main fence, we have kept out most large critters over the years. Two springs ago we had our first deer incursion, a juvenile, who jumped nimbly through the gap between the top of the fence and the higher wire holding yellow ribbons. We raised the fence. One night Tania was up, and heard this barking noise. She figured the deer had tried the same maneuver, hit the fence, and recoiled in surprise. We never saw it again.

This year, for the first time, we discovered a groundhog inside the fenced area. He dug five burrows, including one beneath our pea bed, and another beneath our carrot patch. We trapped it, then realized we had a second one! We resorted to smoke bombs, and haven't seen him since. Our neighbor Jack used to pick them off with his 22, but he passed on a few years ago and our neighborhood now seems to be plagued with them. We read groundhogs can dig tunnels up to 45' long. Here is "junior:"



COVER CROPS

We've already mentioned cover crops in conjunction with the garden devices pic above. This was a spring image. We're coming up on the fall season, and we've already started cleaning beds and sowing cover crops. Here is an image taken in early October last year. The tall reddish crop upper left is Japanese millet, an attractive plant, with mahogany colored leaves and a cylindrical seed head. We have just erected our winter greenhouse, whose side is just visible on the left.



Here is another pic of Tania cutting fava beans in the late spring. The poles for the beans are installed behind her, left, and two of the three burdock bins are behind to the right. The common name for these fava beans is "bell beans," not to be confused with the larger, and much more expensive, culinary fava beans.



SPECIAL CROPS

We grow many culinary and medicinal herbs which do double duty in attracting beneficials and birds. One of these is purple coneflower (*Echinacea purpurea*), with which we make a cold and flu tincture. We mix this with *Echinacea augustifolia*, a smaller plant but with a more potent root. To keep the flowers from leaning toward the sun, we introduced use of a horizontal trellis of steel mesh that comes in 42" x 72" sections, usually used in reinforcing concrete. We support this mesh with emt (electrical metal tubing) which ends up being largely invisible.



We also use this mesh on asparagus, cukes, and herbs (cilantro, dill, chamomile, caraway, meadowsweet) supported with metal poles. This keeps tall plants from flopping over and has replaced wooden stakes. Below are mesh trellises on cilantro, dill and chamomile. It's much neater, and without the tangle of stakes and strings. One of our two corn patches (32 plants each) rises in the background.



Another special crop is our paw-paw collection of three trees, one wild and two cultivars. It is an attractive, tropical-looking tree from the banana family and native to the NE states: Michigan, Illinois, Ohio, PA, W. VA, Kentucky at least. The fruit is tasty, and ripens around late September to October. We gift our neighbors, who love them as we do.



We planted a fig last year, but the cold winter killed the top, despite careful wrapping. It came back, and we hope to get some fruit off it before frost hits. Below Tania peeks through from behind the cane just after she tip-pruned these to direct the fig's energy to the fruit:



This year Tania planted a colorful crop of jardin des gants (below):



NEW VISITORS TO OUR GARDEN

Wild Turkeys!! This is the second year in a row! Here they are feeding under our bird feeder:



Best from your fellow gardeners,

