ALASKA PIONEER FRUIT GROWERS NEWSLETTER

Autumn 2005 Volume 20, Number 3

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Association News

Our fall schedule resumed this October on each third Thursday of the month at the BP energy center building. Look for the reminder cards in your mail. November's meeting will be the 10th from 7-9 pm. We will have a video from the Royal Horticulture Society on "Top Fruit Growing". We also need to discuss some business items. Officers!

Thanks to all who contributed to this newsletter. Let me know how you like Debbie's color photos of Dan's apples. I think it is a very nice start to apple identification in Alaska now that we have so many varieties successfully growing up here.

From the Editor's Garden

Fall blew in on a windstorm this year. the normal mode up here, but this year it seemed to be nearly a month late. I usually have a killing frost by the end of August. and it was the beginning of October before frost finally took my beans. squash. and pumpkins.

The winds blew over one of my loaded apple trees and one of my opal plums (no fruit). I think I should consider staking them. though I have never had a problem before. I have doubts that the plum will survive the winter, as the wind whipped the trunk back and forth, severing roots nearly a full 360 degrees around the trunk. Only the tap-root keeps it in the ground. When I went out to fix it I watered in the roots and packed down more soil. but it seemed there was a large air pocket down one side of the plant, as bubbles rose for some time as I added more water and more soil. The tree had been in the ground 2 years, so it is hard for me to believe the air was there that whole time, but I do not know how such a large air pocket may have developed. If anyone has any ideas, please let me know!

Now winter has arrived, it seems, with no snow. The ground has frozen so that I cannot dig the last of my leeks. My orchard still has frozen green leaves I will need to go pluck when the first wet blanket decides to descend upon us, let the branches break with the load. I can't help but wonder if the constant supply of nitrogen from the chickens and ducks has kept the fruit trees so green so late.

This year I got 2 grafted trees per single rootstock on many of my trees by cutting off the long tap roots on some of my rootstocks and grafting directly onto it. In the past I threw these roots away when they would not fit in the pot. This year I used any tap roots that were at least 8 inches long and that had some root hairs on them. I just used the usual whip and tongue graft and planted it so the graft was just above the soil line. When I re-pot, I will put the graft just below the soil line. The success rate on the tap root grafts was only about 50%, but that is better than throwing away those roots!

Spindle Galls on Local Tree

By Tom Marshall

In July strange growths were found on the underside of some of the leaves of my four year old native American plum tree. Each one looked like a little cigar shaped dark green tubular leaf on a small lighter green stem. They ranged in length from1/4 to 3/4 inches. I brought some affected leaves to Tami Schlies' orchard tour on June 22 and the members present, representing a wide distribution of orchard experience, had not seen this type of gall.

Later an entomologist with the USDA found a very small white larva in one of the galls and showed it to me. It was only about 1/250th of an inch long, but was clearly visible wiggling away under a 50 power binocular microscope. A plant pathologist found a colored picture of a sugar maple leaf with galls that looked identical to the galls on my plum tree. They were called spindle galls and were caused by the insect Vcrates acerisCrumena.

A possible connection between the maple and the plum tree might be that my plum tree was purchased from a New York State nursery, a maple sugar producing area. Once the affected leaves were picked, the galls did not spread and the plum tree is very vigorous. I will gather and burn all plum leaves this fall. I also froze some of the specimens on the leaves they infected for future research.

Hardy Plums

By Debbie Hinchey
(Edited by Bob Purvis)

At the apple pressing hosted at Dan and Miriam Elliott's home on September 8, 2005, we were treated to delicious greenhouse-grown apples by Bob Boyer and plums grown by Bob Purvis (at his Minnesota orchard.)

The plums were ones that Purvis thought might do well for us. If I got it all recorded correctly, they were:

'Toka' – a hybrid from University of South Dakota, is an excellent pollinator. 'Toka' is a vigorous, upright grower that produces medium-sized aromatic, sweet (candy-like) plums that ripen about Aug. 25 in east-central MN. Widely available

'Todd' – (from St. Lawrence Nursery) self-fertile,very productive, a
European plum selection, rated to be hardy to -30 F or possibly even colder. St. Lawrence Nurseries introduction. Fruits are large, oval, medium blue with amber flesh and a mild, sweet flavor.

'Garfield Shults' – Cherry plum, has survived 1 winter in Anchorage in a pot near Bob Boyer's greenhouse in south Anchorage. Highly esteemed for its flavor in Idaho, where it ripens about Sept. 1.

'Mount Royal' – self-fertile, European plum, rated to be
hardy to -30 F. Ripens late August in east central MN. Round, blue plums with black mottling, size about 1-1/4 to 1-1/2 inches. Growth habit somewhat spreading; tree very productive.

'Castletan Plumb' – European origin, rated to be hardy to -25 F. Self fertile, precocious, small spreading tree. Fruits hang well and are of high quality. Excellent for fresh eating, slightly clingstone, ripe late August in east central MN.

Although Bob did not bring the latter to Alaska with him, he made some additional comments on other plums worthy of trial in Alaska.

'Pembina' - a *Prunus nigra* selection, blooms early so should cross-pollenize with Toka or Assiniboine. Hardy in Zone 3, possibly also into 2b. Fruits are red, ripen late July near Yakima, WA so very early. Very good for fresh eating, long narrow pit, not good for preserves. Precocious, spreading growth

habit, low to medium vigor.

'Yakima' - Among the hardiest of all European plums. Tree has upright growth habit and is vigorous. Needs another European plum nearby for cross pollenization. Fruits very large, pinkish-violet skin, amber flesh, very tasty and somewhat aromatic. Ripens early September in east central MN.

'La Crescent' - produces small, soft, sweet, apricot-like plums ripening in late July (near Yakima, WA), hardy in Zone 3. Vigorous grower, late bloomer.

very productive if a good pollenizer plum planted nearby.

Bob also observed that 'Assiniboine' is successfully pollenized by 'Dandy' and that both ripen before September 10 at Dan Elliott's location. 'Assiniboine' would be a good pollenizer for early-blooming plums but is mostly suitable only for cooking. 'Dandy' is good for fresh eating, an orange plum with orange flesh (better ask Dan Elliott to verify the color of plum and flesh).

Nutrient Requirements of Fruit Production

By Tami Schlies

Bob Purvis observed some nutrient deficiencies in fruit trees during his visit here in September and was kind enough to share with all of us some of his knowledge on these issues. I have also investigated some other common deficiency symptoms and expanded on his advice in this article.

We all know that plants need 3 major nutrients to grow well – Nitrogen (N), Phosphorus (P), and Potassium (K). Bob also brought up Boron (B) and Calcium (Ca) as essential to good fruit production. In particular, B, Ca, and K are essential in fruit quality and storage, even though trees with minor deficiencies in these elements may produce just fine.

According to Bob, each year an apple tree needs about 1/10 pound of nitrogen per year of age for optimum growth and production. To figure out how much of whichever fertilizer you use, look at the label – the first number is how many pounds of nitrogen in every hundred pounds of fertilizer are in it. So if you use a fertilizer with a ratio of 10-0-0 you would need to apply 1 pound to be adding 1/10 of a pound of nitrogen. Sandy soils will need fertilizer applied in smaller amounts more often, while clay soils may require less fertilizer and need it less often.

Younger trees should put on more growth than older, bearing trees. New apple trees should grow at least 18 inches a year and mature ones should put on 6 to 12 inches. If your tree is putting on little or no shoot growth, has yellow-green foliage that appears first in older leaves, or perhaps has very small fruit size even if you fruit thinned, you may need to add nitrogen.

Apples are extremely good at withdrawing phosphorus from soil, so they are not commonly deficient. However, our cooler soils have been known to need higher levels of P for other crops. Trees low in P may exhibit purple leaf veins, petioles, and young shoots early on in the season and then green up later, sometimes becoming very dark green in the expanding leaves.

Apples use a lot of potassium due to heavy fruit load. If there is a deficiency, it will be seen in older leaves that scorch along the edges and then curl upwards, especially on stone fruits. The plants will also flower poorly and have low fruit set. Lack of K may also show up as poor color development on red fruited apple cultivars. Pears in particular may need extra amounts of K to set fruit. Potassium also helps promote frost resistance in blooms and is necessary in the maturation process of woody stems for winter hardiness.

Magnesium (Mg) is another nutrient needed in regular amounts for fruit production. Mg deficiency can be caused by excessive watering or using to much high potassium fertilizer. It is more common in highly acidic soils. Yellowing will appear between the leaf margins, leaving behind red or yellow pigments. usually in older leaves first. Epsom salts are a quick fix at a rate of 8oz in 2.5 gallons of water used as a foliar spray (you can add a few drops of dish soap to act as a wetting agent.) This will need to be done every couple of weeks, or you can apply epsom salts to the soil at 1.5 oz per square foot.

Unlike the major nutrients, Boron and Calcium deficiencies are seldom seen in the leaves of fruit trees. Usually it is not until fruit set that the lack shows itself. Boron deficiency can lead to terminal dieback and certain bark conditions, but mostly it is noted in a tree that flowers well and yet has poor fruit set. Apples that do set may have cracking early on that is not due to over watering. The cracks may heal and leave black wounds on the fruit. The flesh may also be corky in areas. Pear trees in particular are sensitive to boron deficiency. Alaskan soils sometimes exhibit B deficiency first in crops of brassicas with a disorder called whiptail, where the leaves grow deformed. It can also cause beets to have black spots and carrots to split open. There is a very fine line between boron deficiency and boron toxicity, so care should be taken in application. Bob suggests a foliar spray made of 1T of borax per 1 gal of water, soaking the tree during the growing season one time each year. Do not apply boron if you do not have good reason to suspect a deficiency. It is probably best to get a soil analysis first.

Calcium is often provided in the lime we use to bring our acid soils into a better pH range. But some fruits need more than that application provides. Ca provides disease resistance, makes apples sweeter, and makes strawberries firmer. Tomatoes are notorious for blossom end rot, a disorder related to a lack of calcium either because of infrequent watering or low Ca in the soil. Apples that are low in calcium may develop bitter pit, which shows up as sunken areas on the bottom of the fruit that turn dark and develop corkiness in the flesh beneath. Constant water is the best treatment for keeping calcium levels constant. There are also several products on the market that can provide a quick boost of calcium for your plants if you have had these symptoms on your fruit in the past.

Did You Know?

- Several of our members were featured in an article in the Frontiersman that later appeared in the Anchorage Daily News? See the article at: http://www.frontiersman.com/articles/2005/09/13/news/news2.txt

- Debbie Hinchey found an informative web site: www.treesofantiquity.com. They are in California and sell organic fruit and/or trees.

- Dan Elliott got the Grand Champion prize for the outdoor fruit with his beautiful apple collection – ten varieties, all named, sitting pretty in a basket!

- Paul Larivierre had amazing blueberries, and said he keeps the pH down by watering with 1T. vinegar in his 1.75 gallon watering can. He also fertilized with ammonium sulfate in the spring and used a little aluminum sulfate later on, but the aluminum sulfate lowered the pH too much too fast.

Here's how I make a homemade EarthBox(TM) in about 10 minutes, and for about $10 (instead of the $30.00-plus-shipping that the genuine article costs).

.MATERIALS (figure 0):

- **2** 18-gallon (or similar) tote boxes with lids, such as Rubbermaid. Dark colors are preferable. Also, a box that is somewhat wider is preferable to one that's deeper. (You can also use larger totes, but note that once you fill them with soil, they'll be very hard to move.) The more straight-sided the box, the better.

- **1** 5" pond basket (these are plastic planters with perforated sides to allow the free flow of water)
- **1** 2-foot length of 1-1/2" plastic pipe or tubing (1-1/2" should be the outside diameter). **(NOTE: Not shown in the pictures is the fact that I cut one end of the tube at an angle. This helps the free flow of water through the tube and into the water reservoir in the bottom of the finished box.)**

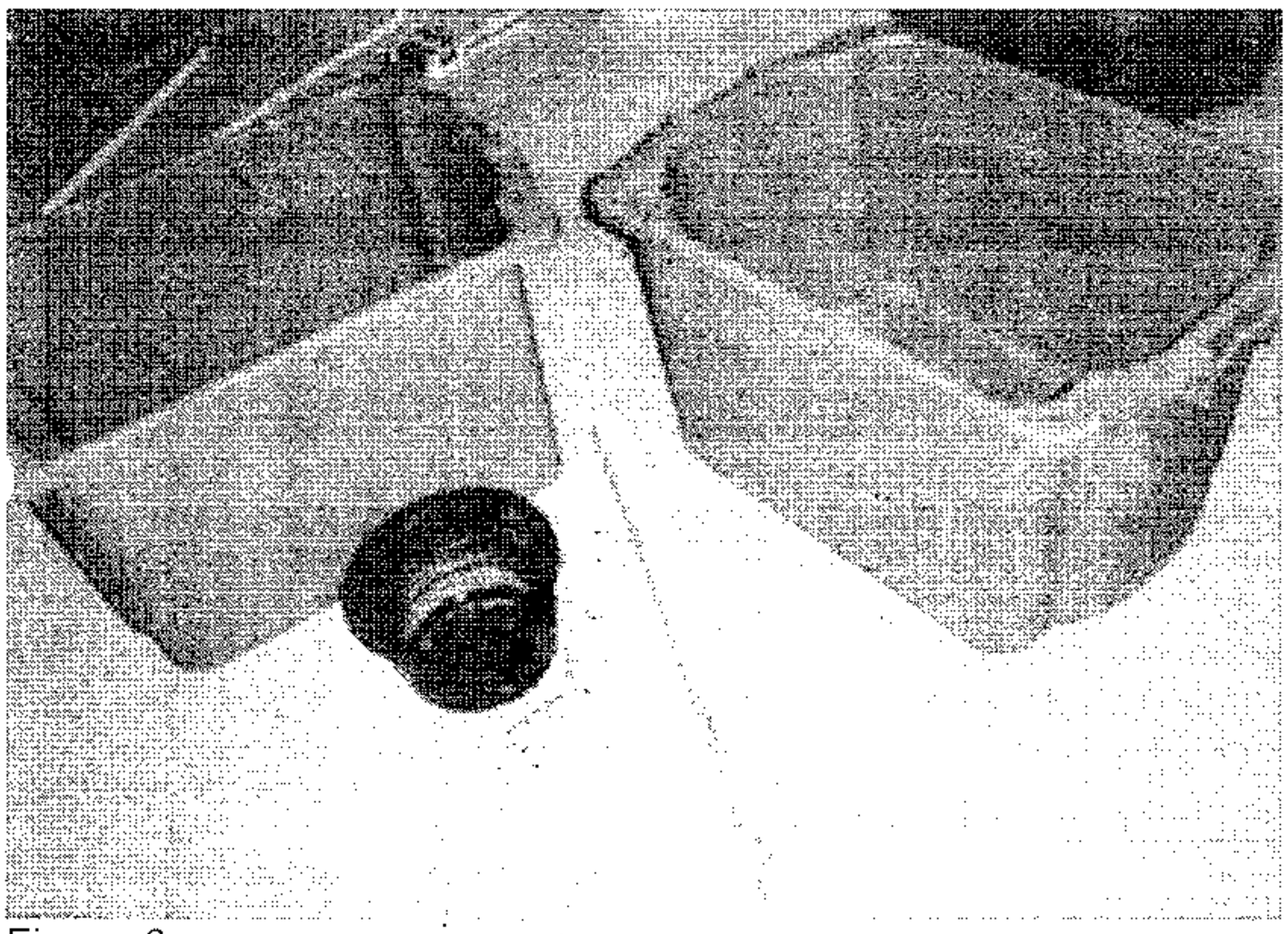


Figure 0

EQUIPMENT:

- a pencil or pen

- a drill with a 1/4" or larger bit and a 1-1/2" bit
- a saw (handsaw will work, but a jigsaw makes it much easier)

STEP ONE

Take one of the totes, the pen/pencil, and the pond basket. Mark the HEIGHT of the basket all around the outside of the tote (see Figure 1).

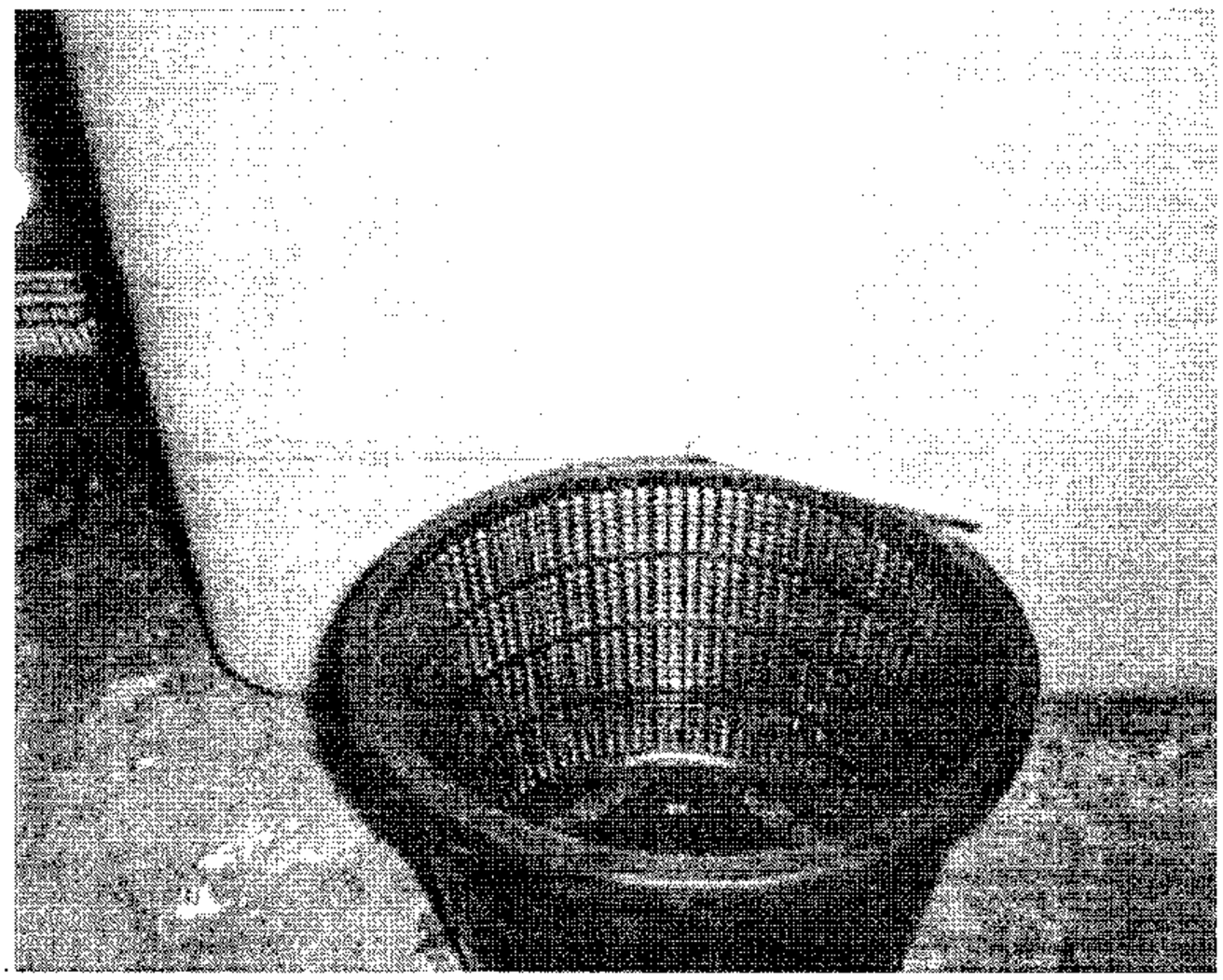


Figure 2

STEP 2

Cut along this line. When you've cut the entire box, discard the top (open) half; you won't need it. See Figure 2.

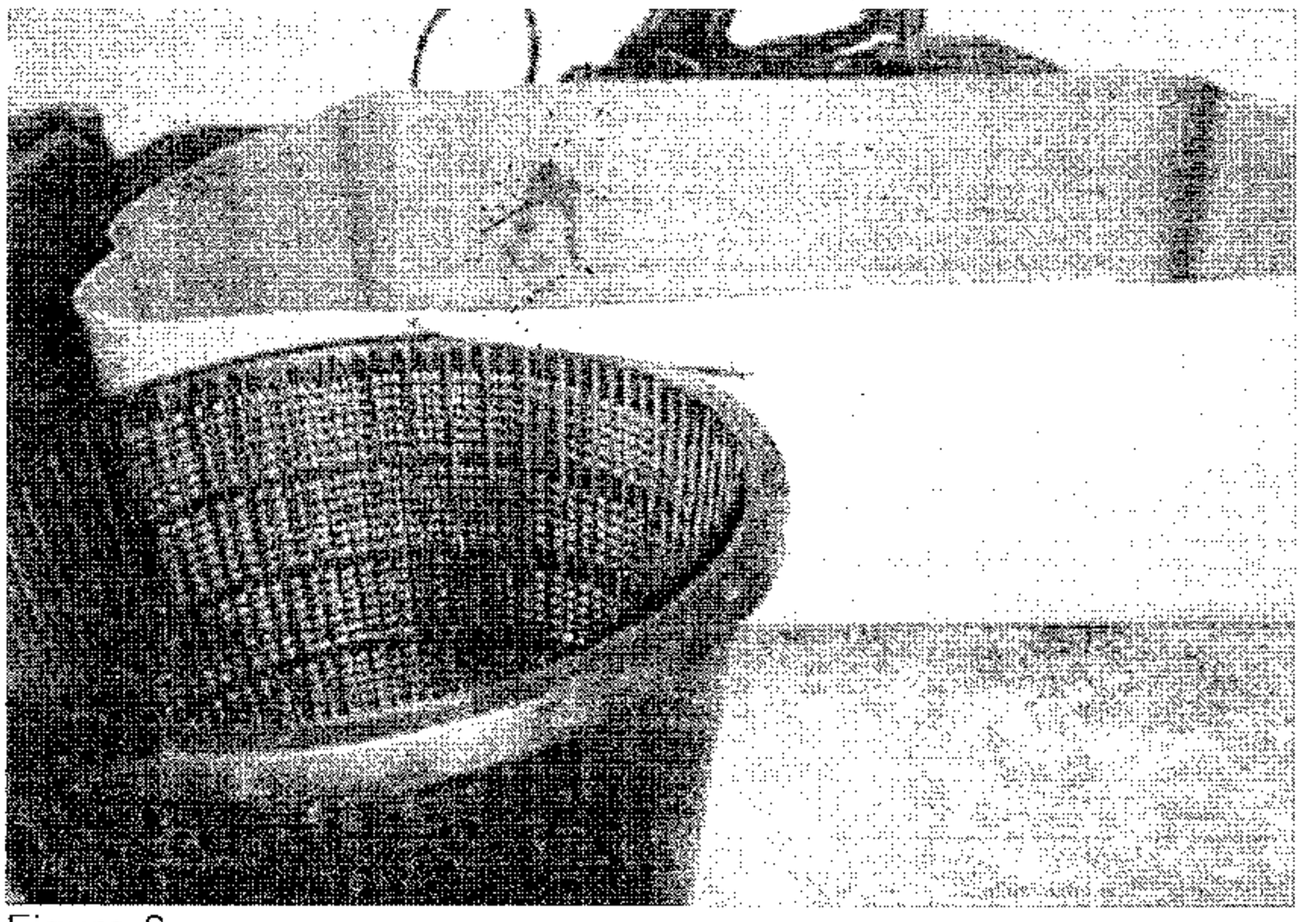


Figure 2

STEP 3

Turn the bottom portion upside down. Take the pond basket, put it upside-down on top of the bottom portion of the tote, and trace the circle. Cut the circle out, but you're going to cut about a half-inch or more INSIDE the circle (so that this hole is about an inch smaller in diameter than the top of the pond basket). After you've done this, drill a 1-1/2" hole in the corner of the tote bottom, and a lot of small (1/4" or so) holes all over it. See Figure 3. We'll call this piece the "base."

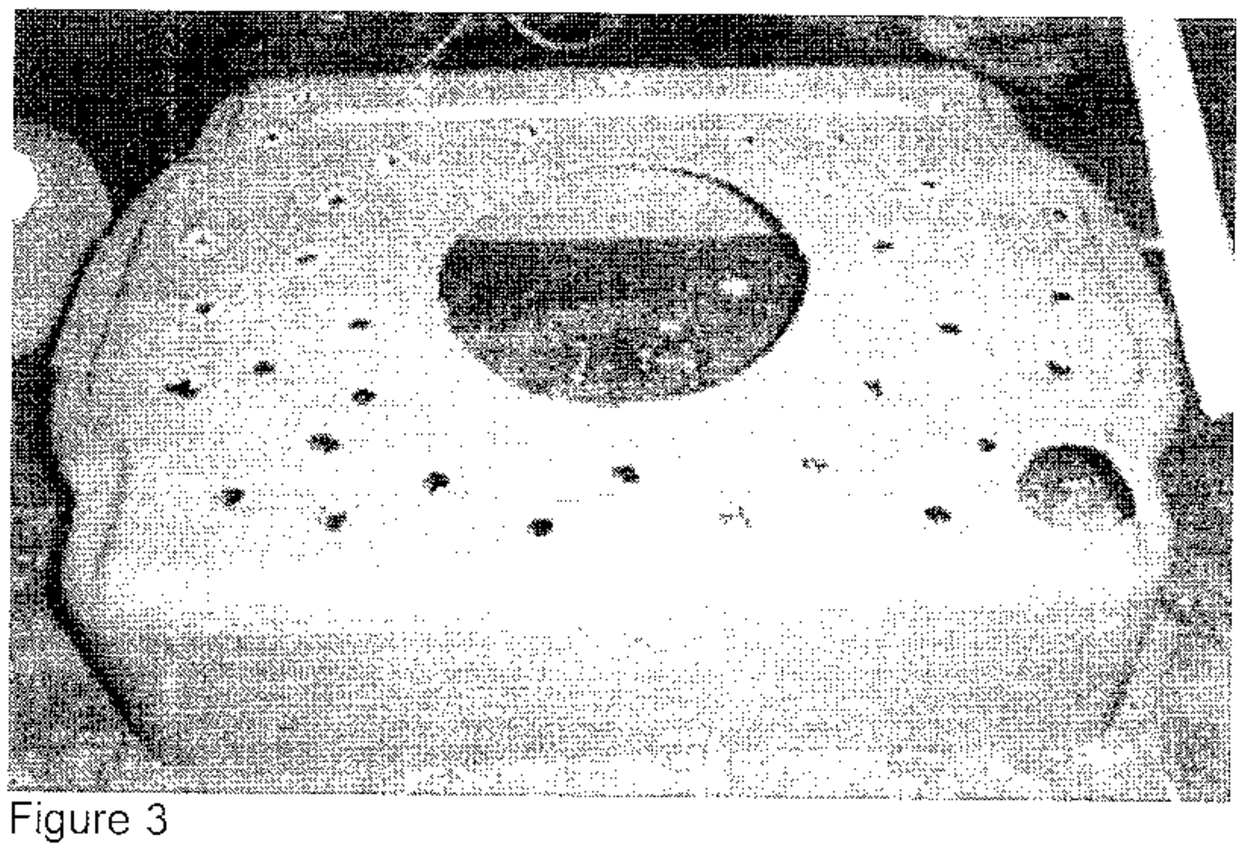


Figure 3

STEP 4

Take the pond basket and put it right-side up in the bottom of the second tote box (the one that hasn't been used yet). See Figure 4.

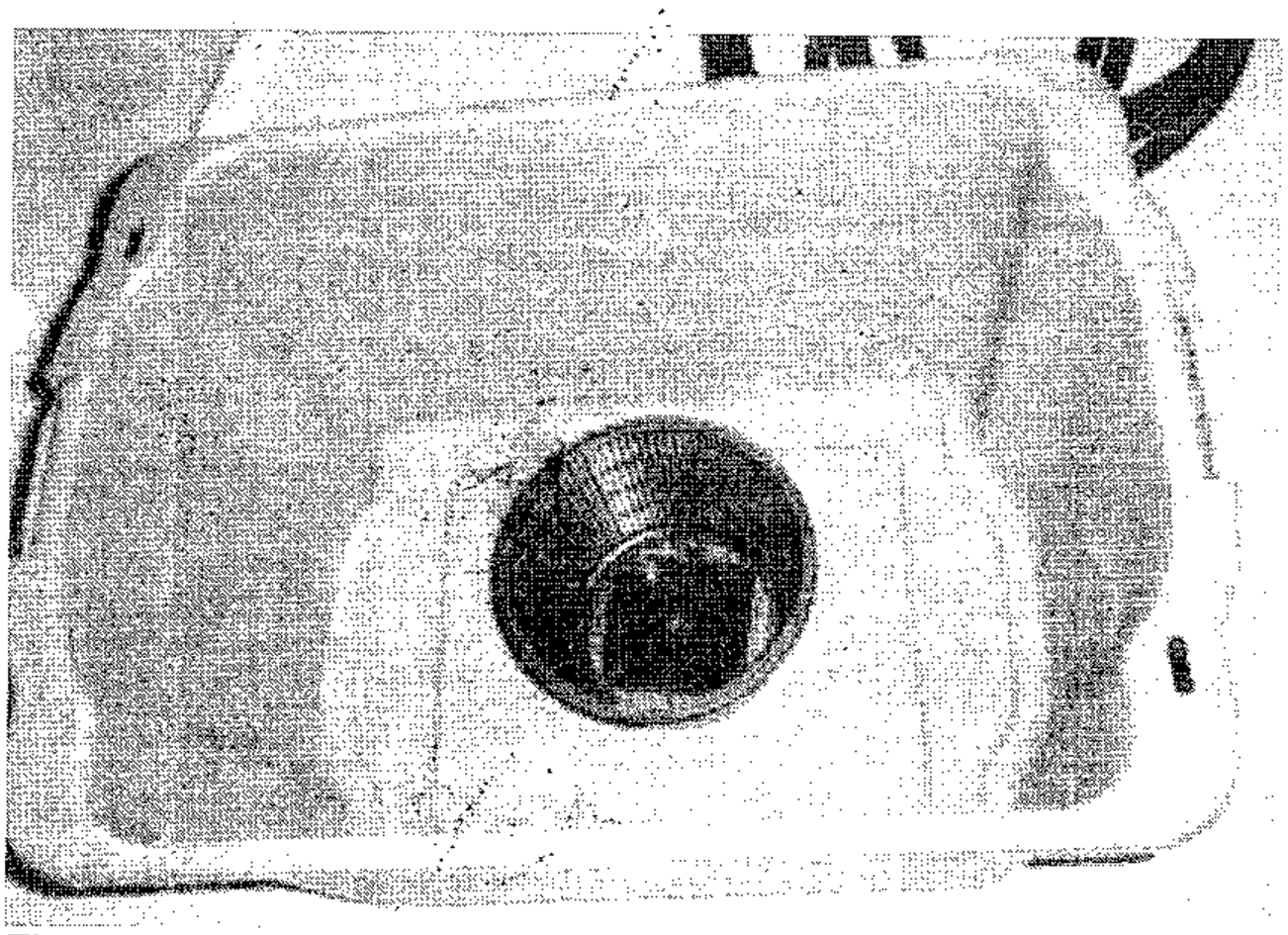


Figure 4

STEP 5

Put the base in the tote box (drilled side up), wedging it down as far as it will go, and positioning the pond basket directly under the big hole. See Figure 5. Because the big hole in the base is smaller in diameter than the top of the pond basket, the pond basket will help support the weight of the base once the soil is on top. And because the pond basket will be filled with soil, it will act as a wick for the moisture (much like the square wicks in opposing corners in the authentic EarthBox(TM)).

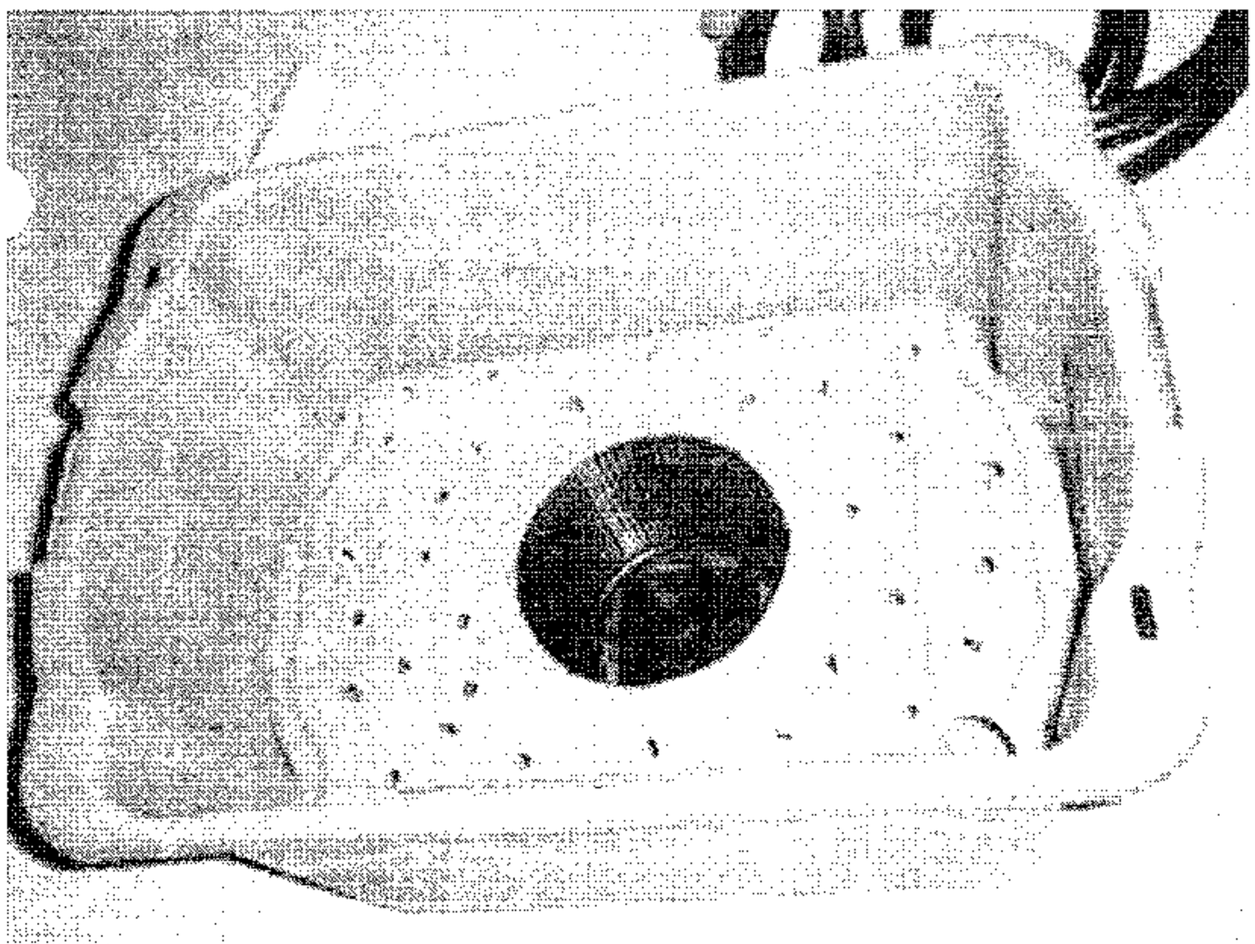


Figure 5

STEP 6

Drill a 1/4" (or slightly larger) hole straight through the outer box AND the base just below the level of the base. This is the drainage hole. See figure 6.

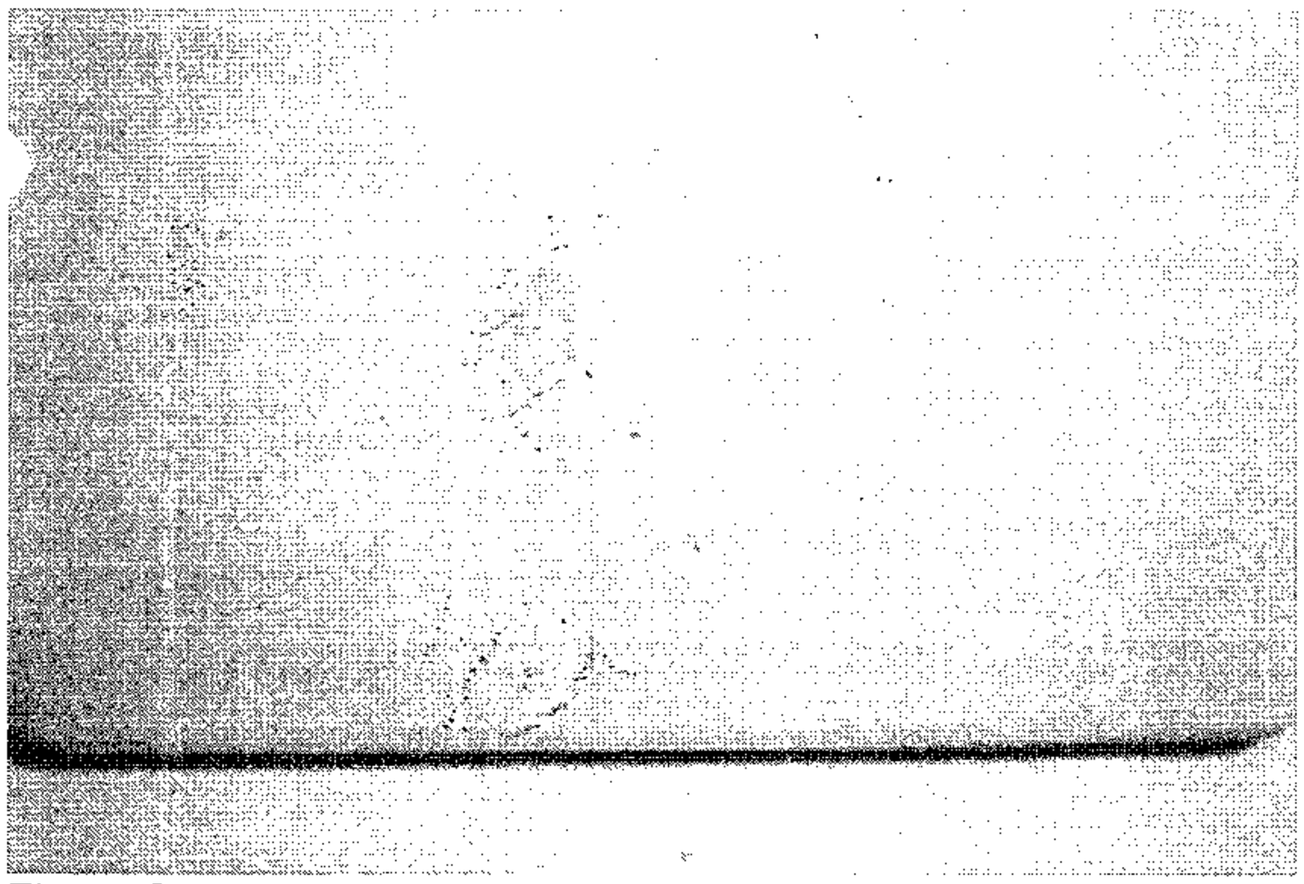


Figure 6

STEP 7

Cut the end of the 2-foot length of 1-1/2" pipe at an angle (if you haven't done so already) and feed this angled end into the 1-1/2" hole in the base. This is the pipe you'll use to fill the box with water. See Figure 7.

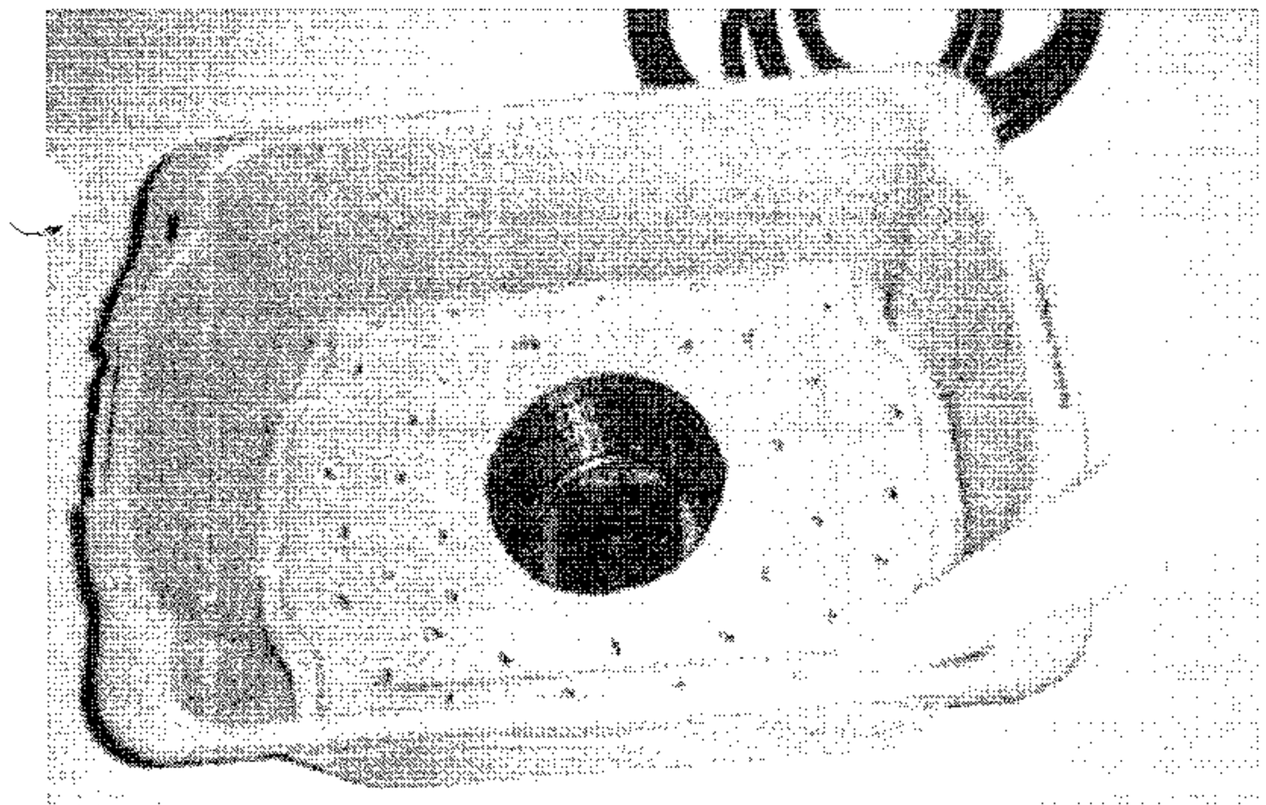
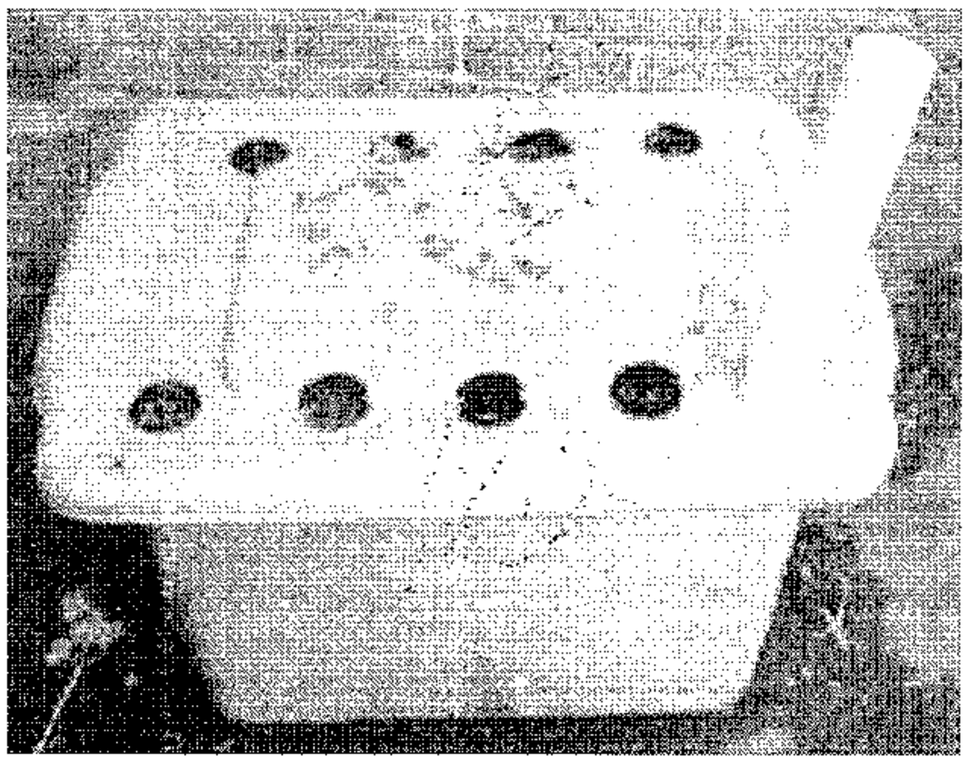


Figure 7

STEP 8

You're pretty much done. Drill a matching 1-1/2" hole near the corner of the lid for the pipe to go out, and enough other equally spaced 1-1/2" holes in the lid for however many plants you're going to put into the box (I use the EarthBox planting guide to tell me how many plants of any given type I can reasonably fit in the box). Fill the box with soil (the pond basket and the entire remaining box above the base). Pour on the fertilizer stripe as shown in the Earthbox planting guide. (They also recommend adding lime or dolomite to the soil if you're planting tomatoes.) Put on the lid. There you are! See Figure 8 for the box I made for last year's herbs.



UPDATE: May 20th, 2005

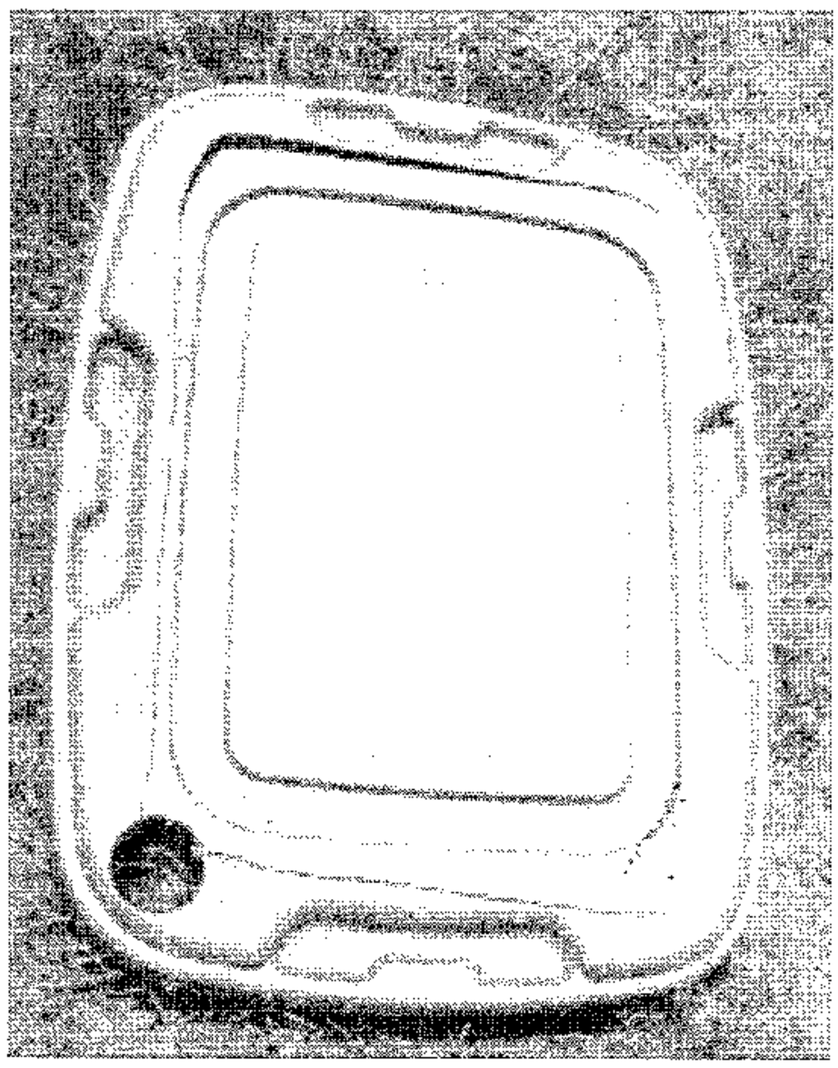
Last summer, I tried an improvement on my homemade Earthbox(TM). Didn't want to post it 'til I'd tried it. It worked just as I'd intended, so here it is.

The improvement is to the LID ONLY. I'd decided that drilling the holes in the lid to plant the seedlings through was pretty inconvenient if you were planting more than a couple of seedlings -- the dirt balls wouldn't always fit through the holes in the lid, so you had to plant them in the box WITHOUT the lid and then put the lid on and feed the seedlings through the holes...which could

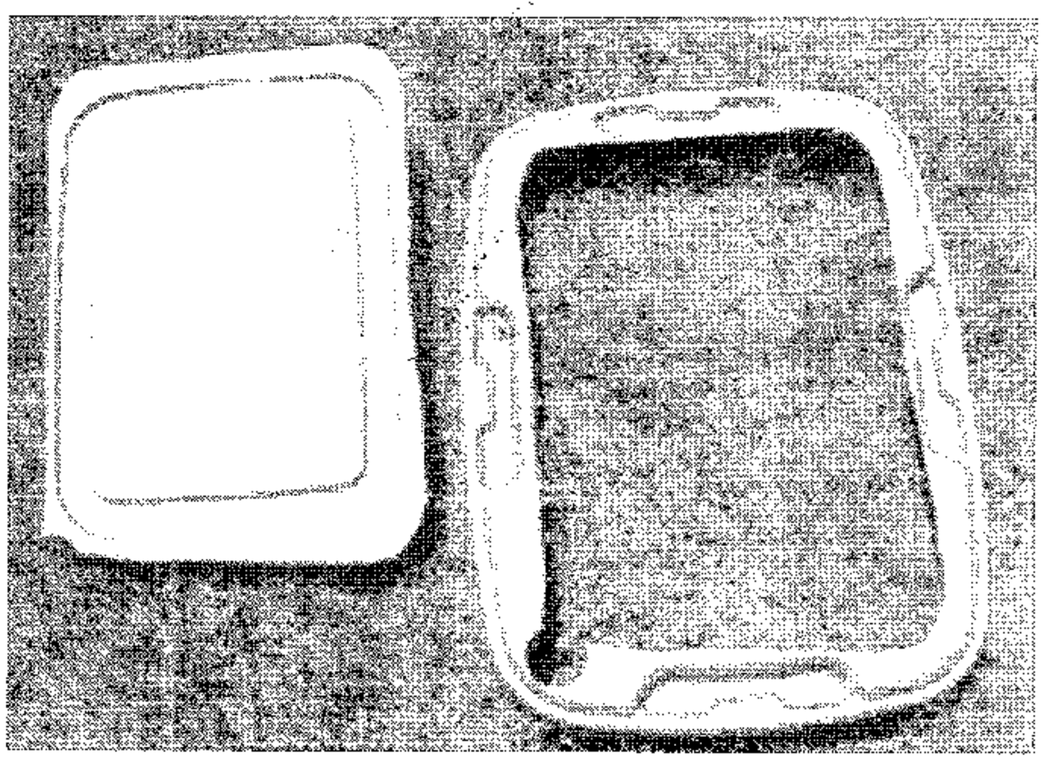
hurt the seedlings and was troublesome if the planted seedlings didn't line up perfectly with the holes.

So instead...

STEP 8 REVISED



Take the lid that fits onto the box. Cut out the center of the lid, leaving just a rim (about 2" worth), enough to snap back onto the box. (You can discard the center piece, we won't be using it.) It should look like this:

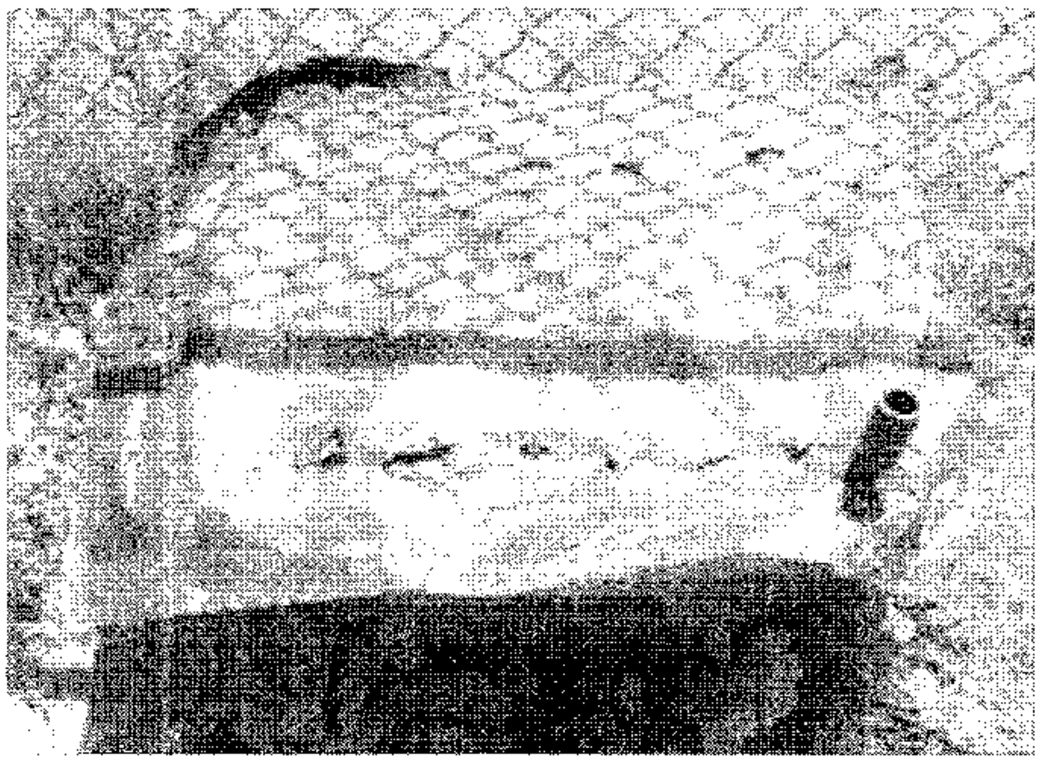


(Notice that I've cut a circular area in one corner for the pipe. This is not strictly necessary. I did it so that I could have the pipe all the way in the corner, leaving more room for plants.)

STEP 9

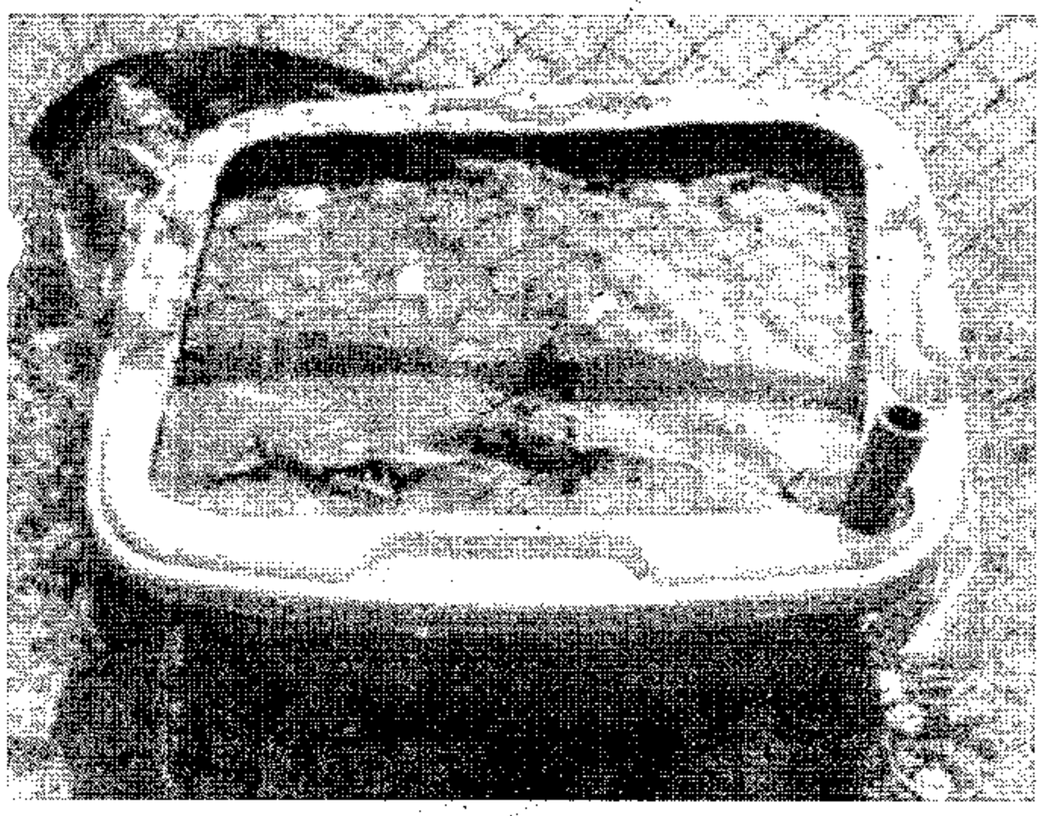
Now cut a piece of plain black tarp (vinyl, etc.) so that it is at least a couple of inches bigger around

than the top of your faux Earthbox(TM). Cut a hole in it for the pipe to fit through. When you're ready to plant, cut "X"s in the tarp where the plants will go. (This is very much like how the real Earthbox(TM) tops work.) (In this photo, there's some black tubing instead of the PVC pipe.)

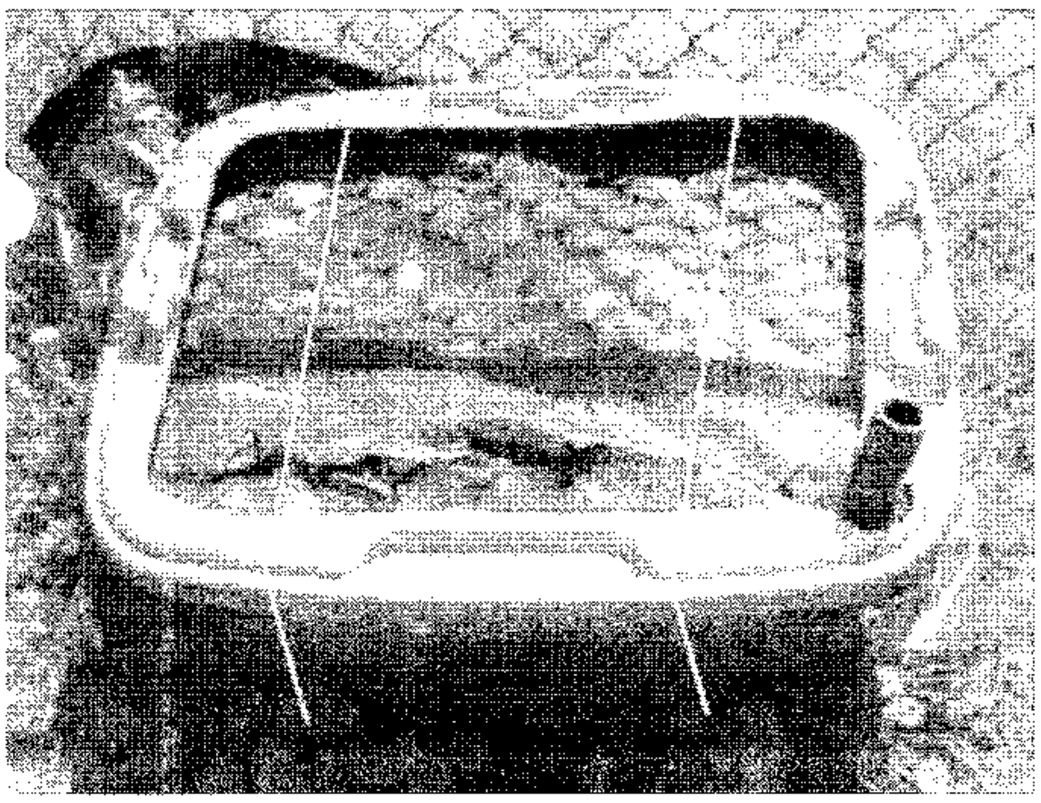


STEP 10

Now just snap the rim onto the box:



Note that because of the tarp, the lid may NOT snap neatly into place anymore. This may not be an issue for you, but if you're in a windy area, you might find it necessary to tie the rim in place:



There are several advantages to this arrangement. First, planting is significantly easier through the flexible tarp than through the inflexible plastic lid. Second, because the tarp is black, it helps heat the surface of the soil, which is better for the plants. Third, if you want to plant items in a different arrangement from year to year (with, say, fewer holes), all you need to do is cut a new piece of tarp instead of drilling a whole new lid.

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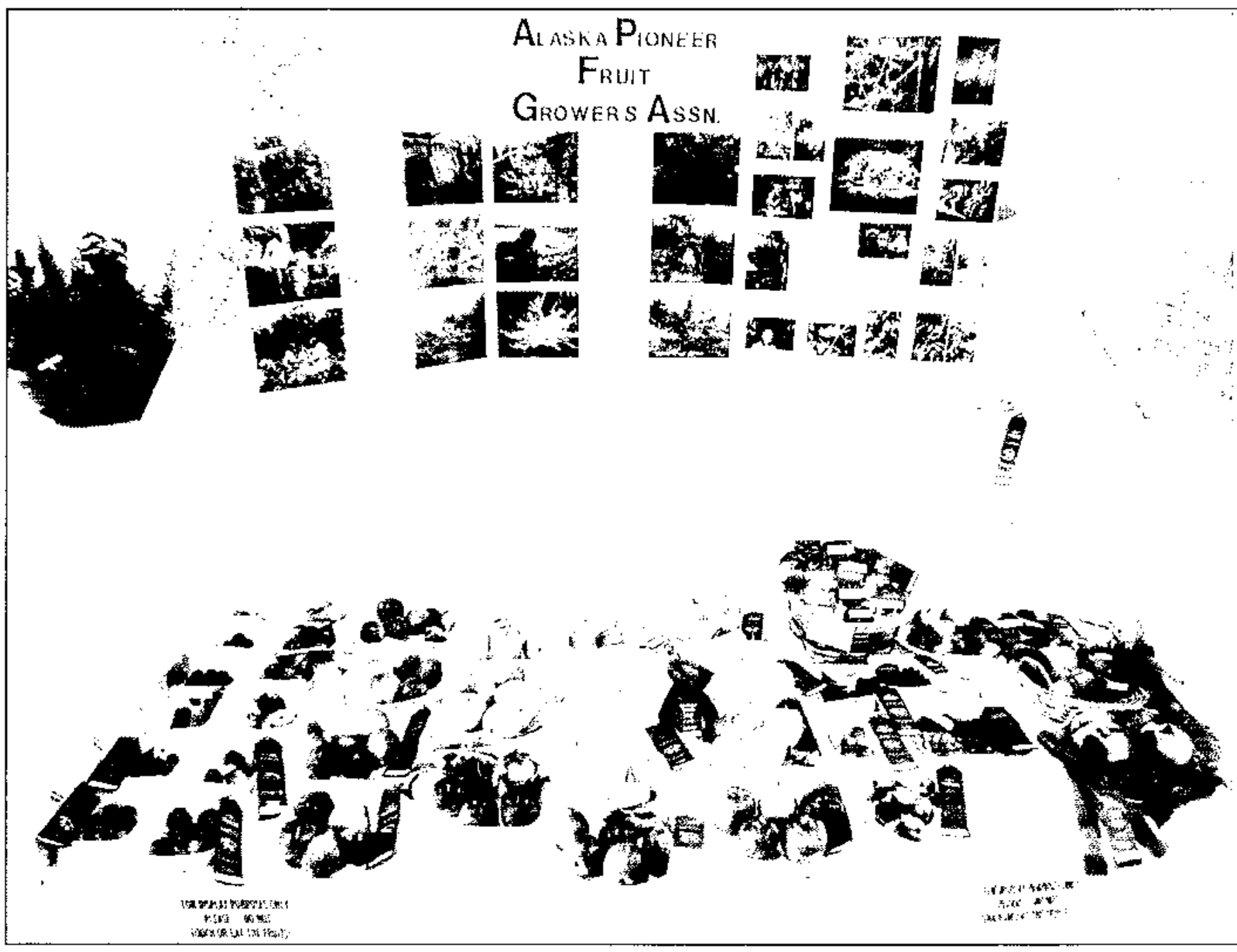
Valley Apples

Some of the hardy varieties grown in Southcentral

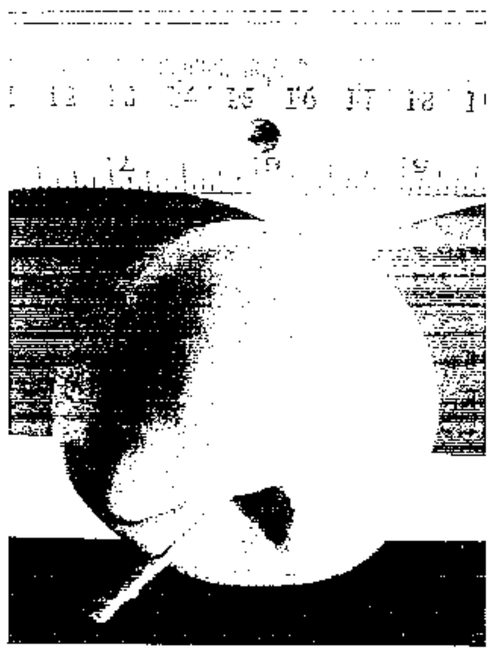
Valley Apples—Display created by Dan Elliott for Alaska State Fair in Palmer
From left to right—Back Row: Advance, Yellow Jay, Rescue, Shaefer, Melba, Lowland Raspberry, Morden 359, Prairie Magic, Carroll, Jersey Mac, Zestar, Prairie Sun, Trailman. Middle Row: Parkland, Garland, Brookland, Goodland, Northland, Norland, Norlove, Norhey, Norkent, Norcue, Norson, Noret. Front Row: Red Heart, Ukalaskoje Nalivnoje, Drew Brook, Yellow Transparent, Lee 21, Oriole.

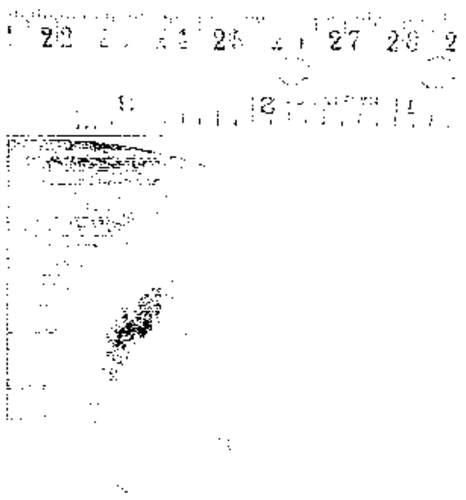


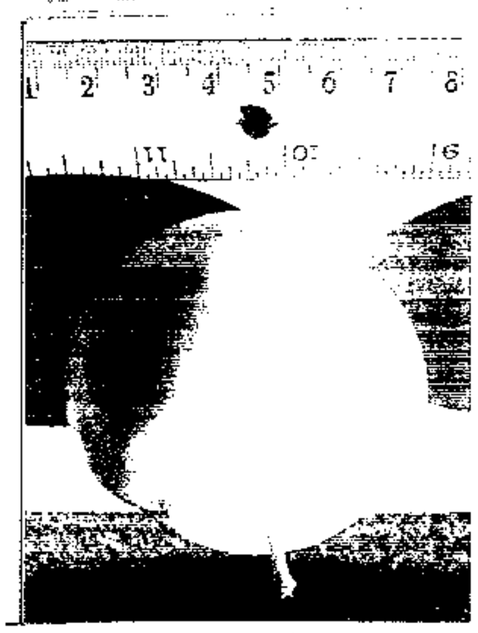
Fruit Entries are Growing

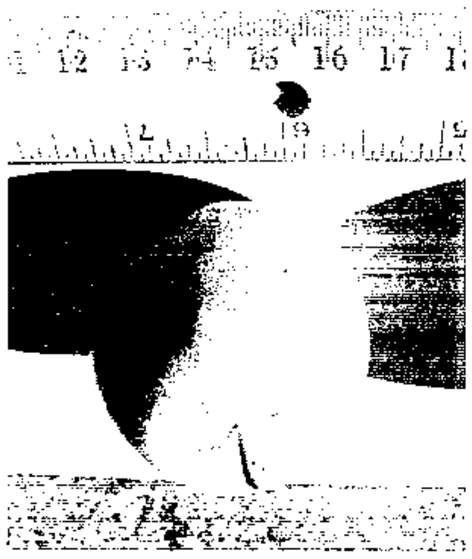
Fruit entries at Alaska State Fair in Palmer (for the second week of entries) in front of our poster (created by Paul Lariviere) with photos of our bearing fruit trees.

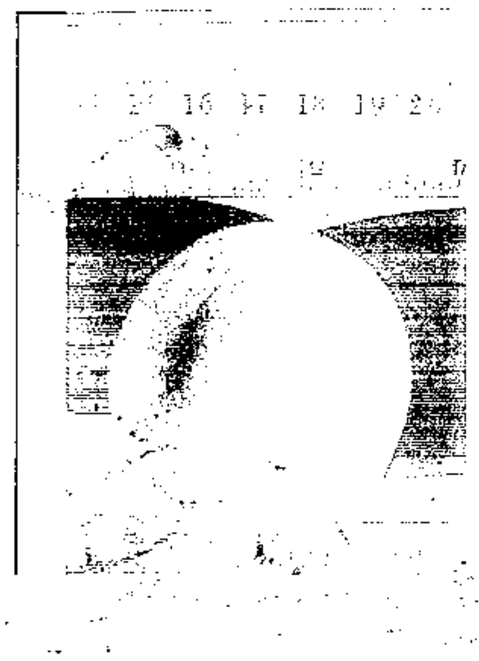
Photos by Debbie Hinchey

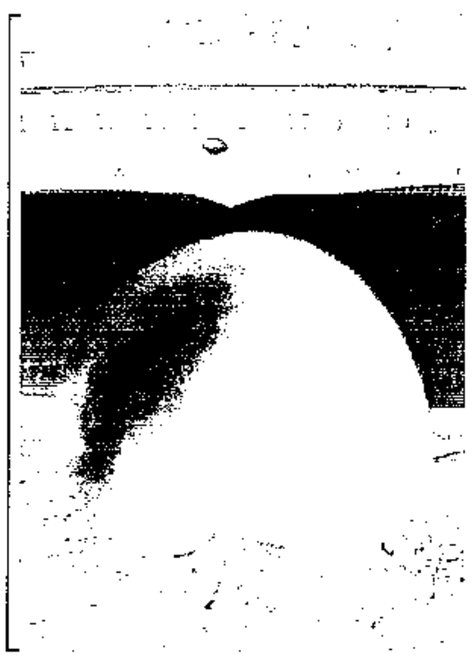


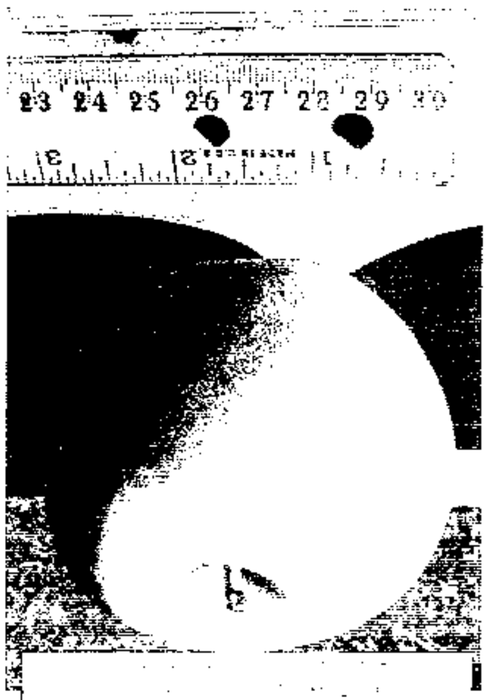


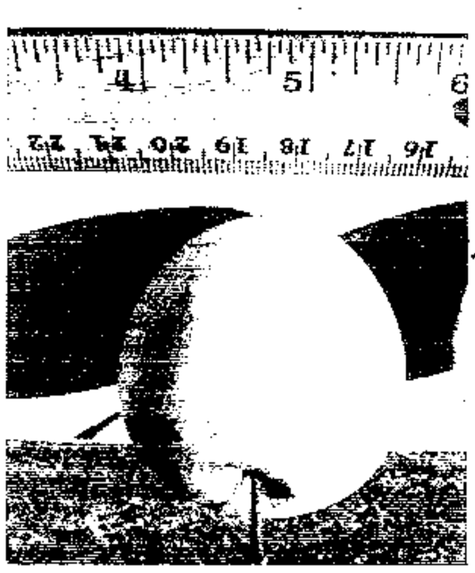


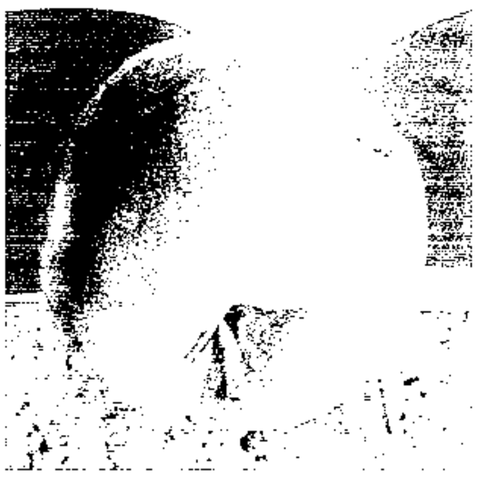


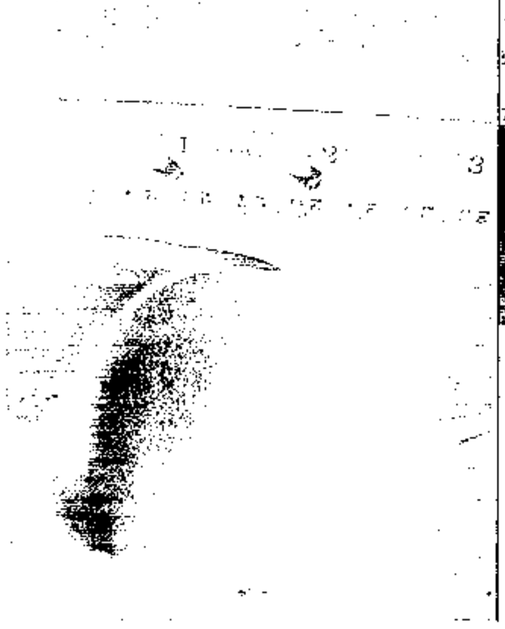


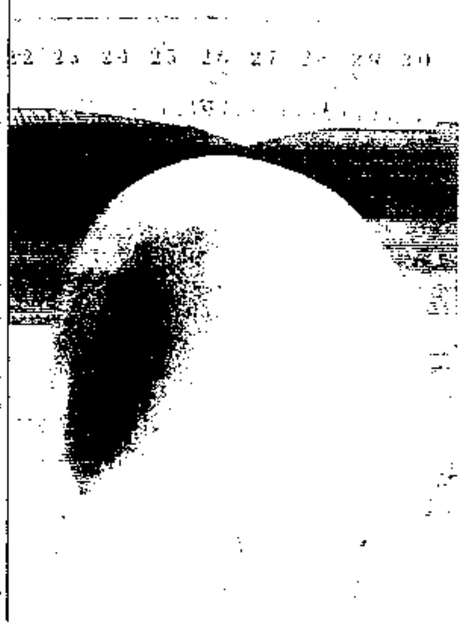


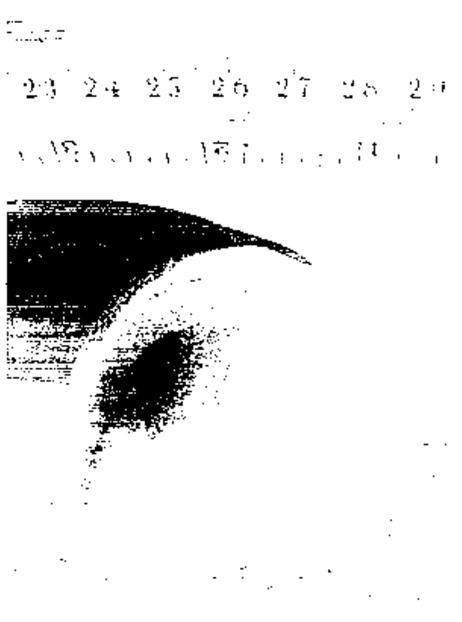


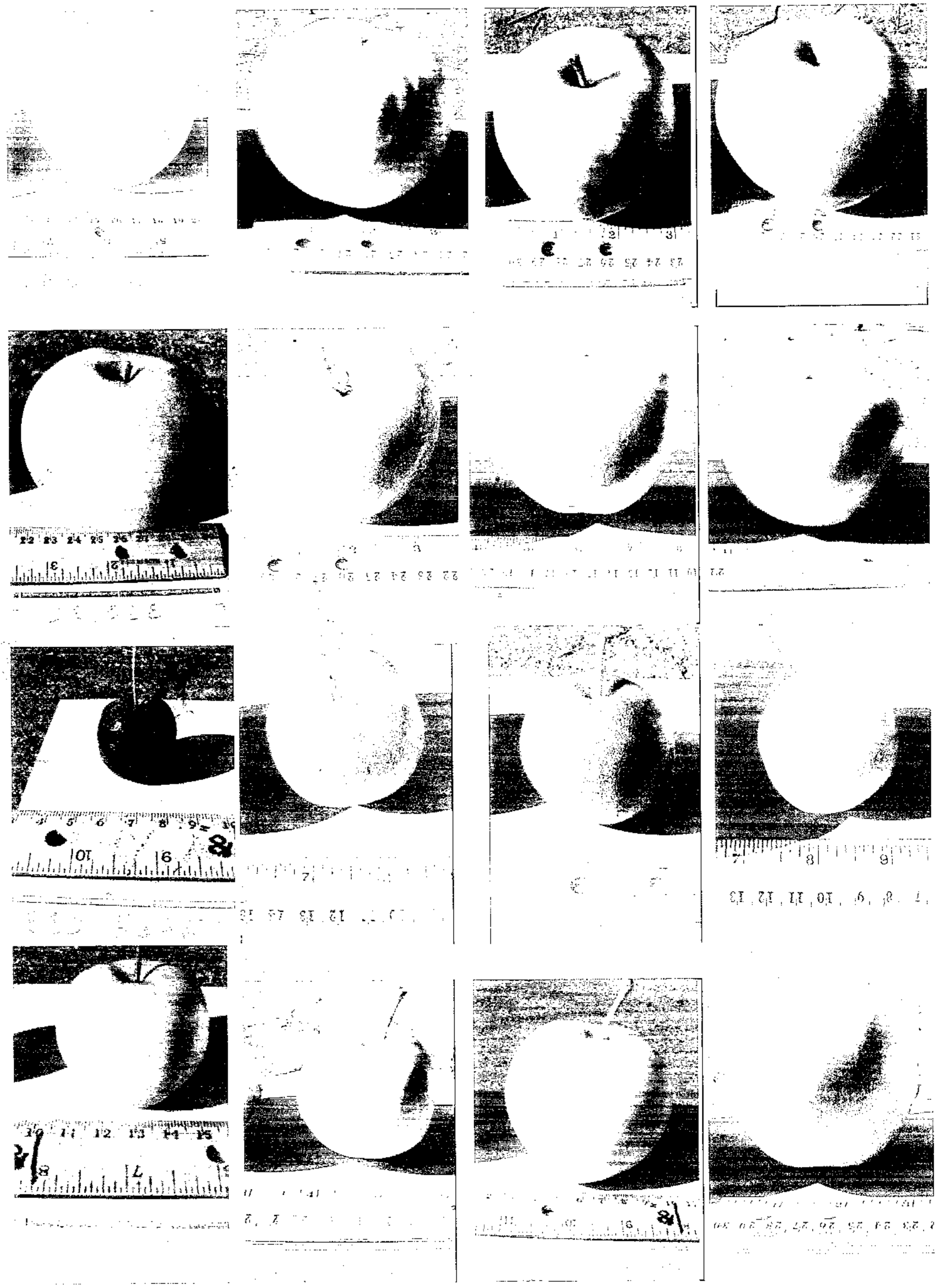










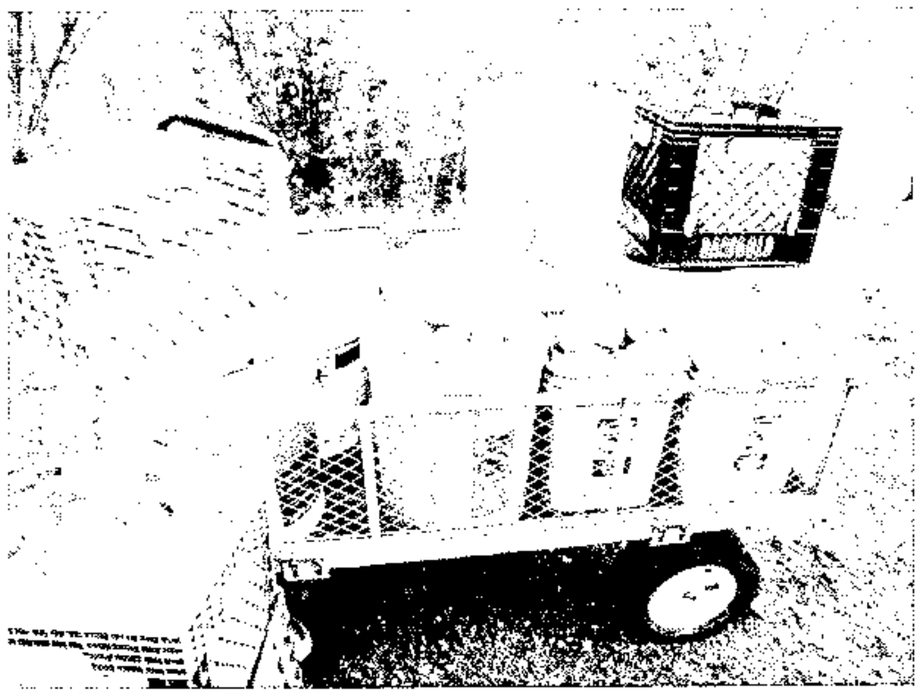


Pressed Apples = Cider

September 8, 2005

Hosted by Dan & Miriam Elliott

Apples sitting pretty and ready for pressing.



Kevin Irvin has apples and jugs ready for his turn to make cider.

A member feeds apples into Dan Elliott's motorized apple grinder . After the whole apples are ground up, they fall into a slotted container and manually moved over to the manual press (with the black T-handle showing in upper center of the photo.) As the apples are squeezed, the juice flows into a plastic bucket . Members were able to intercept some of the fresh cider for tasting— and yummy it was!

Many of the members have a chance to talk about fruit while others go around Dan's orchard with Bob Purvis to look at the trees and pick up pointers on fruit production.

After the juice is collected into the plastic bucket, it is filtered as it is bottled. Some members plan on freezing their cider in the plastic jugs they filled.

by Debbie Hinchey

Featured Fruit

Blueberry - *Vaccinium spp.*

Related to azaleas and rhododendrons, blueberries need a highly organic, cool, moist, well drained soil with a pH between 4.5 and 5.5. Tiny, urn shaped white or pink flowers decorate the plant in spring, followed by green berries that turn blue when ripe. Roots grow very near the soil surface, so cultivation of the soil around the plants is prohibited. Mulch of sawdust or wood chips work well to conserve moisture and reduce weeds. Plant at least two varieties for best pollination.

BLUEBERRY BREAKFAST BARS
5 c flour
1 T baking powder
1 ½ t salt
½ c (1 stick) butter, softened
2 c sugar
4 eggs, room temperature
2 t vanilla extract
1 c milk
1 ½ c oats
4 c fresh or frozen blueberries
1 ½ c corn chex, crushed

Preheat oven to 350. Cream the butter and sugar together in a large mixing bowl. Add aggs and vanilla and beat until smooth. Add milk. In a separate bowl combine flour, salt and baking powder. Add to wet mixture. Add oats and then blueberries (batter will be very thick.) Spread evenly into a 12 X 19 baking sheet and sprinkle crushed chex over the top. Bake 45 minutes until pick inserted in center comes out clean. Cool in pan, then cut into bars.