



The Berry Basket

Newsletter for Missouri Small Fruit and Vegetable Growers

Volume 4 Number 2

Summer, 2001

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From the Editors

by Marilyn Odneal

I hope you are all keeping cool! I suggest you curl up in a spot of shade with your Berry Basket and an ice cold glass of lemonade. A special note to **Missouri Blueberry Growers**, please fill out and send in the survey on page 13. This information will help greatly in representing our industry in the state.

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Healthy Birds

by Ben Fuqua

Birds are attracted to ripe blueberries. Large birds actually “pick” the ripe berries and eat the fruit on site or carry the whole berry from the planting. Smaller birds just tend to puncture the fruit, but often ruin the entire cluster and leave a mess amid the other ripening berries. Although the amount of fruit damage seems to vary from year to year and from one planting to another, fewer berries and reduced fruit quality can quickly add up to a major loss of income for the grower. Most of the birds that feed on blueberries in Missouri are also protected by *The Federal Migratory Bird Treaty Act*, therefore, growers must develop strategies to “discourage”, rather than eliminate, them from their plantings.

Strategy 1. Auditory/mechanical/visual devices are primarily used to “scare” birds away from blueberry plantings. Scarecrows, plastic hawk and owl balloons, colorful ribbons, bird distress recordings, propane cannons, high-tensile wires, firecrackers, etc. have proven effective, but usually last for only a short period of time. Frequent moving or combining devices seems to help confuse the birds, keeping them in flight and away from the berries. One manufacturer now offers a computer-controlled system that emits the bird distress sounds at random intervals throughout the planting. The cost of auditory, mechanical, or visual devices can range from almost nothing to several hundred dollars, depending on the number and type used. The downside of these “scare-away” devices is their rather limited effective ranges and the fact that birds get accustomed to

the sights and sounds of these devices rather quickly.

Strategy 2. Alternate food sources are often helpful in directing birds away from ripening blueberries. While blueberries are apparently a good food source for birds, ripe mulberries, cherries, and harvested wheat fields also attract many of the same birds. Growers of other fruit crops have even resorted to feeding old or outdated crop seeds to keep the birds away. However, this approach could actually attract more birds from outside the area and might get expensive in a hurry.

Strategy 3. Netting to exclude birds has proven to be the most complete and effective method in keeping birds away from blueberries. Netting will exclude nearly 100% of the birds. This allows the berries to fully ripen, resulting in both greater yields and higher quality fruit. The cost of netting can range from as low as \$400 to over \$2500 per acre depending with the type, manufacturer, and quality of material. Nets formed from nylon, acrylics, polyethylene, or similar materials, with mesh sizes ranging from ½ to 1 inch, are available from several companies. Generally, nets with the smaller openings are heavier and somewhat more expensive than those with larger mesh sizes. Some small birds can squeeze through openings in the 1” nets, which causes major problems. (Birds can always find the smallest of openings to get in through the net, but can never seem to find the same hole to get out)! Another major expense in netting a blueberry planting is the cost of the support (trellis) system. Strong wood or metal posts, particularly those on the perimeter of the planting, are essential for supporting the wire grid and nets. Several other posts (one-inch PVC or similar material) will be needed in the interior of the planting to keep the wire grid and net from sagging. Netting a blueberry planting is also labor intensive. Nets should be put up before blueberries start to ripen and taken down at the end of the harvest season. Leaving nets in place year-round is not recommended. While most of the nets themselves are durable enough to withstand our Missouri winters, the wear and tear on the support system (posts/wires, etc.) and the damage to the nets from wind usually means high repair bills the following year.

Strategy 4: Bird repellents on blueberries have produced mixed results in Missouri. While most growers report a reduction in the number of birds immediately after applying the repellent, in several plantings the birds returned after a few days. Timing the initial application to correspond to the beginning of fruit ripening and making sure the repellent is “stuck” to the berry seem to be the keys to keeping birds from eating the ripe berries.

Summary: Bird damage is a serious problem in most blueberry plantings. While most growers appreciate having wildlife around, birds during blueberry season are not welcome. Birds can quickly destroy a blueberry crop, damaging 30-80% of the crop in some years. Growers may need to incorporate one or more strategies to prevent or at least reduce bird damage to the blueberries. One thing birds and humans do have in common; they both like ripe blueberries. But the “healthy” aspects of blueberries being touted by nutritionists and other food connoisseurs apply to humans, not birds. Yet I wonder - are we producing “healthier birds”?

Blues News

by Jay Chism

As I am writing this article, many of you are starting to wind down your blueberry harvest. Harvest time is always an exciting time on our farm, as I am sure it is on yours. I am excited to see the pickers come and I am excited to see the season draw to a close! Either way, there is always a lot to do and think about during this busy time.

I had the opportunity to speak to a few of our council members across the state this week, and I wanted to share some of the information with you. I was encouraged by what I heard for the most part.

Although there were many predictions of poor crops, not everyone experienced a reduction in yields this season. I did contact some growers who experienced what they considered to be 30-50% of a normal crop, with a normal crop for the growers being 4,000 to 6,000 pounds per acre. The growers with reduced yields pointed to a combination of factors. The late spring frost was the first comment most of them made. The late freeze took a large

percentage of early berries, but did not affect the later varieties. Another reason thought to cause lower yields was the dry weather last summer. It was just too hot and dry to keep the plants healthy and growing throughout the entire season. These two reasons were reported to share the largest blame. Other reasons were more of the norm and more site specific; high pH problems, bird problems, thunderstorms, etc.

Pick your own prices for the growers I spoke to ranged from \$1.00 - \$1.75/lb. Most of the growers stayed near the upper end of these prices. Pre-picked berries ranged from \$1.65 - \$2.50/lb. Again, the upper end of this range was more of the norm for the growers I spoke with.

I asked growers if they were going to add plants to their farms or take any acreage out of production. I was encouraged by the number of farmers who were looking to replace plants in rows that had died out over the years and were investigating newer varieties to add to their production.

Nearly everyone I talked to was excited about the demand for their berries this season. The extra media attention about the health aspects of blueberries may be one factor in the extra traffic on our farms. However, another reason for the higher demand is the continuing efforts of the Blueberry Council of Missouri. Those of you who have contributed in the past have done a great job of keeping our product out there for customers to hear about. Your dedication and hard work have helped create a demand that exceeds production for our state.

Price per pound continues to go up! Demand is high for our product! How many other types of agriculture in our area can say the same? Now is a good time to look four to six years into the future. See what changes you need to make to keep your farm moving in the right direction. Visit other growers and share information about varieties and production cost. Think about your farm needs and the needs of your family as you look to the near future and beyond. I'm excited about the possibilities.

Remember-

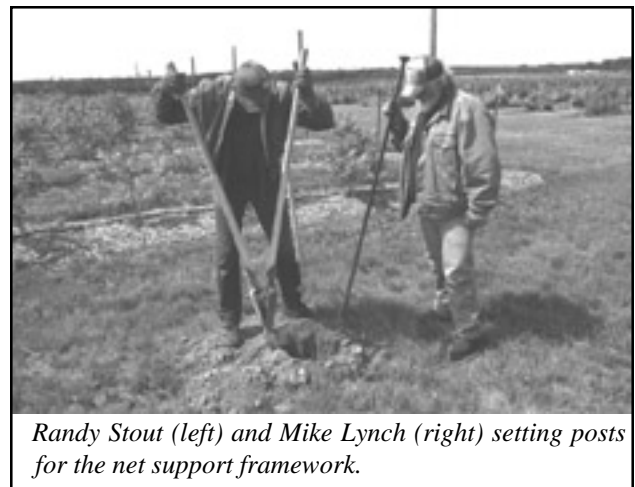
Life is about:

Planting, Growing, and Harvest.

Operation Bird Net

by Marilyn Odneal

No one knows better than Dr. Martin Kaps that birds love blueberries. Dr. Kaps has established and managed several highbush blueberry research projects and has investigated various methods of bird management as well. In order to protect the crop in his present cultivar evaluation plots, Dr. Kaps decided to net the entire planting. He enlisted the help of Mike Lynch and Randy Stout to engineer and construct a netting system to protect the research data from being eaten by the birds.



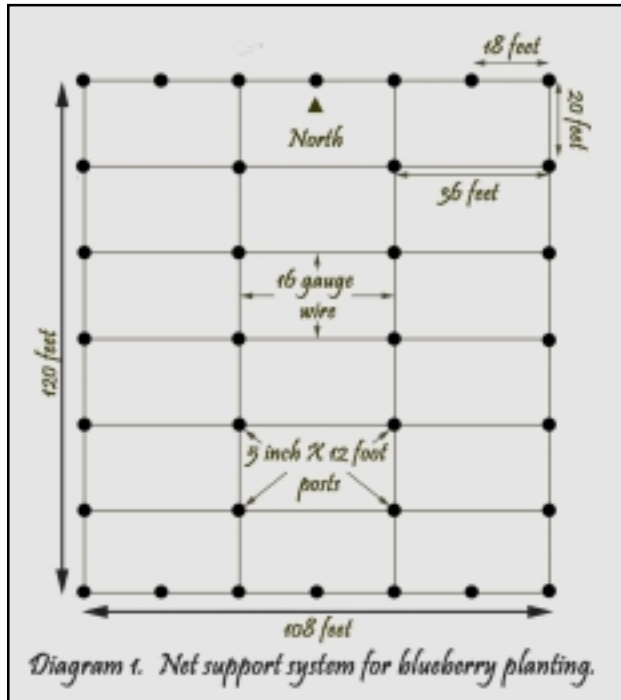
Randy Stout (left) and Mike Lynch (right) setting posts for the net support framework.

The plants were netted just before harvest, although planning and construction of the framework for the net support began well in advance. The benefit of sound planning was seen when the net pulled over the planting and secured in place in less than an hour.

A grower's decision whether or not to net a planting is major since netting is expensive. Very large plantings are not often netted because bird predation is not as severe on a percentage of crop lost basis as it is on smaller planting. The loss of the crop to birds must be weighed against the cost of the netting in order to determine whether this choice will be cost effective in the long run.

Mike and Randy wrote the steps of their procedure for this article. We would like to share their procedure with you in case you are thinking about netting to exclude birds from your planting.

Blueberry Netting Procedure



Materials:

34 treated 5 inch X 12 foot posts

1 roll galvanized wire

1 roll nylon twine

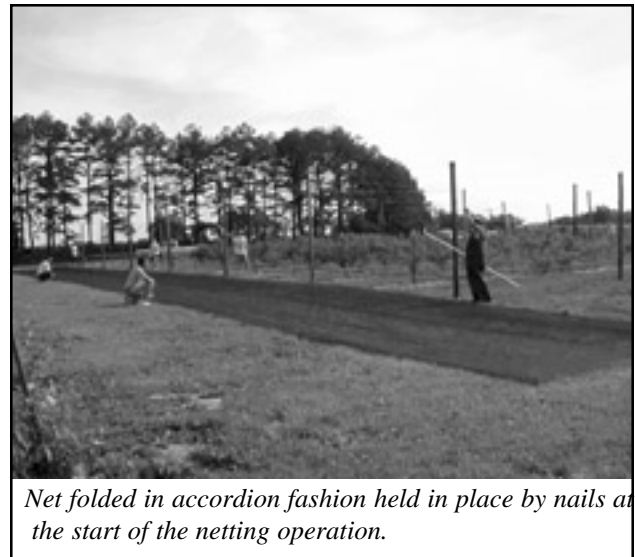
1# 1 inch staples

2 rolls nylon netting

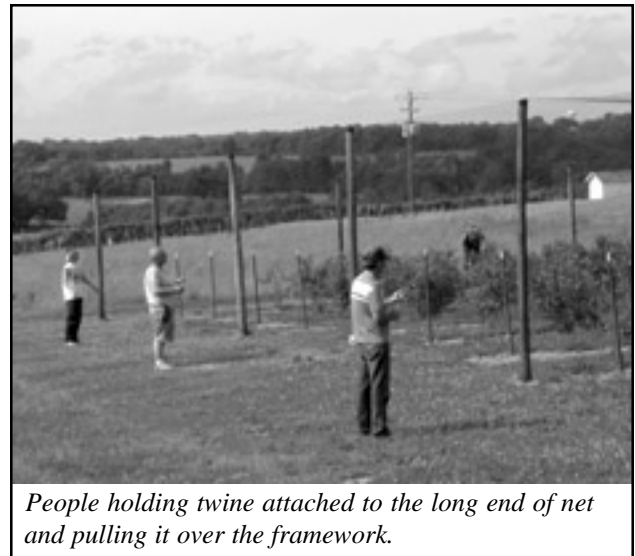
12, 8 inch spike nails

1 roll duct tape

1. Lay out post locations – 34 - 5" x 12' posts (see Diagram 1 above).
2. Augur and install 12' posts 30" deep.
3. Attach 16# gauge wire on top posts perimeters using 1" staples.
4. Attach 16# gauge wire to center isle posts.
5. Duct-tape top of posts to reduce snagging.
6. Lay out netting 15' wide x 155' long.
7. Lay out the second piece of netting and attach to first piece (long sides together) with nylon twine.
8. Repeat steps 6&7 alternating sides until sufficient netting has been connected in a piece large enough to cover the entire top and sides of the planting.



9. Fold net in accordion pleats at one end of the planting and secure with large nails pushed into the ground.



10. Attach twine to the top front edge of the accordion pleated net. Run twine over top wire to opposite side of planting. A minimum of four places was needed for the size net we installed.
11. Using sufficient manpower you need people at both ends of the planting as well as some inside to make sure the netting does not snag at the top of the posts. Undo the first fold of netting



Sufficient manpower.

from the nails and begin to pull the netting over top wires with the attached twine.



Using the "L" shaped PVC poles to keep the net from snagging at the tops of the posts.

12. The crew inside the planting will help move netting over posts with "L" shaped PVC poles at least 10' long to avoid tearing.
13. Continue to release the folds of the netting from the nails and continue pulling across the top of the planting until the net covers the planting.
14. Fabricate bottom anchors using 16# gauge wire 8" long and folded in the shape of a "V".

15. With the net covering the planting evenly, remove all slack and begin to anchor bottom with "V" staples, starting at the corners and working to the center of each side.



Removing slack from the net before securing the base.

Not only did Mike's and Randy's procedure make raising the net fast and efficient, it also paid off at the end of harvest when the net was removed for storage. Even so, you learn something new with each project. Mike and Randy agreed, "If we had to do it all over again, we would start with 14 foot posts instead of 12 footers. That way the sprayer would fit under the nets in case spraying was necessary during harvest. It would be good to keep that option open."

Raspberry Crown Borer Damage on Blackberries *by Patrick Byers*

Last month I noticed a number of primocanes that were wilting and dying in the blackberry plantings at the State Fruit Experiment Station. As the symptoms appeared after a windstorm, my first thought was that the canes were damaged by high winds. Upon examining many of the canes, however, it was evident that the damage was due in part to the activities of the raspberry crown borer.

The adult raspberry crown borer is a clearwing moth that resembles a hornet or yellowjacket. The mature larvae are 1 - 1.5 inches long, white, with a

brown head. The adult moths emerge in late summer, mate, and lay numerous eggs on the underside of blackberry leaves. After hatching the larvae move to the base of the canes, form a blister-like hibernaculum at the base of the cane, and begin boring numerous galleries into the crown the following spring. The larvae continue to feed for two seasons. The larvae form pupae during midsummer of the second year, and adults emerge in late summer to complete the life cycle.

Damage caused by the raspberry crown borer is insidious and can be mistaken for the symptoms of several diseases. Above ground symptoms include loss of stand vigor and spindly canes. Individual canes may wilt or lodge, particularly after windy periods when the soil is moist. Crown injury is evident when affected canes are pulled up and examined. Roots and crowns may be girdled, and cavities bored into the interior of the crown. Check any primocanes that suddenly wilt or break at the crown for signs of infestation. The larvae may be noted by splitting infested canes.

Control of raspberry crown borer begins by removing alternate hosts, such as wild blackberries, from the vicinity of the planting. If practical, eliminate infested canes and crown from the planting. At present there are no insecticides specifically labeled for raspberry crown borer control in Missouri. A postharvest application of an insecticide labeled for other insect pests may give some control of emerging raspberry crown borer adults, particularly if the spray is directed to the base of the canes. Control of the raspberry crown borer may not be achieved until after 2-3 years of treatment.

Grafting Nut Trees: The Bark Graft

by John Avery

Black walnuts are in demand and increasing in popularity. Most of the black walnuts in the nation come from wild trees. The nut quantity and quality is quite variable from year to year. There are selections with good quality nutmeats and more consistent annual production. The procedure described in this article is for those who want to

graft a stand of seedlings or young trees over to one or more improved selections for better nut quality and more consistent yield. The same procedure can be used for pecan, hickory, or other native nut trees that you may have a market for.

The grafting procedure I describe is for *top working trees that are older than 5 years and are 1.5 - 2 inches in diameter at the height you would like to graft*. For smaller trees, other grafting procedures are recommended.

1. Collect scion wood during the dormant season (Nov. to Feb.) and store in the refrigerator until grafting time in the spring. Scion wood should be one-year-old wood; that is, wood that grew in the growing season before; ¼ - 3/8 inch diameter size and 6 - 8 inches long with 3 - 4 good buds. Wood should be healthy and disease free.



Budstick removed from cold storage before grafting.

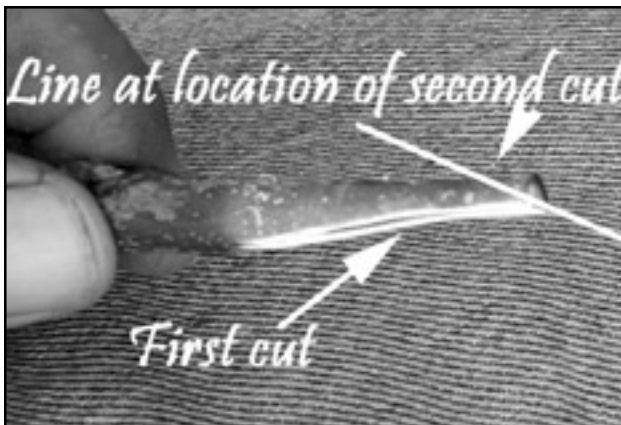
2. Start grafting in the spring after bud break. For black walnut, wait until xylem pressures have subsided, about 3 to 4 weeks after bud break. For most nut trees, grafting can start between March 1 and March 15. For black walnut, April 1 will be the earliest starting date. Select a section of the trunk on the tree to be grafted (rootstock) that is straight, smooth, and free of limbs. The trunk diameter of the tree should be at least two times the diameter of the scion wood at the point of grafting. With larger scion sticks the diameter of trunk may

need to be even larger than this. Using a saw, make a cross cut through the trunk to remove the top portion of the tree. Preferably, there should be some limbs with leaves left below the cut.



John Avery pointing at the place where he will cut the tree and insert the budstick.

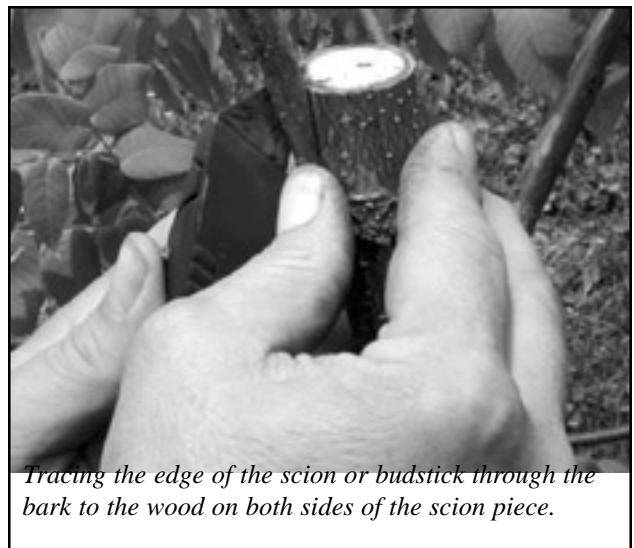
3. Take the scion stick in your hand with the bottom end of the stick pointing away from you and make a 1.5 - 2 inch slanting cut on one side of the scion stick. The cut should be smooth and flat, and should go about half way through the scion.



Detail of the long slanted cut made before the smaller 1/4 inch cut at the tip (left end) is made before insertion.

Next, hold the scion up to the trunk and with your knife trace the edge of the scion through the bark to the wood on both sides of the scion piece. Be sure the cuts go all the way through the bark to the wood below. If the bark is more than 1/8th inch

thick, it can be shaved off to thin the bark down for a better fit of the scion. Be careful not to shave the bark off down to the wood, though. Then, about half way down the two parallel cuts make a cross cut that connects the first two cuts. It should look like an H in the bark. Peel out the top part of the H and discard the piece of bark. Take the scion piece and opposite the first cut make a short, 1/4 inch, cut which will form a wedge with the first cut on the scion stick. Take the scion and slide it in the groove made in the bark of the trunk until the wedge slides under the bottom of the H flap.



Tracing the edge of the scion or budstick through the bark to the wood on both sides of the scion piece.

5. Hammer two small nails into the scion to hold it



One of the two nails that will hold the graft.

firm against the wood of the rootstock. The bottom nail should be through the H flap of the rootstock and the scion wood itself.

6. Wrap the rootstock and scion with grafting tape or other moisture proof material to help hold in moisture and give extra strength to the graft union. Other materials that would work are florist tape or flagging tape. These are plastic and will help keep moisture around the graft until union between the scion and rootstock has had time to form.



Wrapping the rootstock and scion with grafting tape to hold in moisture and add strength.

7. Next, wrap a piece of aluminum foil around the graft union and all cut surfaces. Do not cover the whole scion stick with the foil though. This is to reflect the sunlight and keep the graft union cool during the healing process.



Covering the graft with foil to reflect light and keep the area cool.

8. Last, take a sandwich bag, cut one corner out of it. Cut just enough of the corner to allow the bag to slide over the scion stick.



Put a plastic sandwich bag over the graft.

Take a rubber band, and tie the bag corner around the scion stick just above the graft. It should cover the aluminum foil or any exposed cut surfaces. Then take a second rubber band and place over the trunk below the aluminum foil and any cut surfaces. The top rubber band should be tight enough to exclude rainwater but the bottom should be only tight enough to hold the bag but still allow any water or condensation to run out from the graft. Clear storage plastic wrap from the grocery store can also be used for this procedure, being sure to make a



Tying rubber bands around the graft to secure it.

couple of wraps around the trunk and then tying off with rubber bands as before.

9. The graft should be allowed to heal for three to four weeks. The buds of the scion should be breaking by this time along with buds on the rootstock. At this time, if buds on the scion are growing, the bag can be removed along with the rubber bands. The aluminum foil should be left on the graft for another 4 to 6 weeks. Any new shoot on the rootstock within a foot of the graft should be removed at this time to keep competition for nutrients and water with the scion to a minimum.

10. After 6 weeks the aluminum foil can be



Photo taken in late June of a surviving bark graft grafted in May of the same year.

removed if it is still covering the graft. At this time, take a sharp knife and cut through the grafting tape or plastic tape to allow expansion of the trunk/scion union. There is no need to remove the tape, just cut

through it and allow weathering to remove it at a later date. A small cane or stick may be nailed to the side of the trunk, and the scion tied to it to give the new growth some support against high winds or birds perching on it at this time. Any grafts that fail the first time can be grafted again until mid-July. After mid-July, the scion will not have time to grow sufficiently to mature wood for the winter.

Note: With this graft, one to three scions can be placed around the rootstock graft site. Allow all scions that live to grow the first two years but cut back to only one scion after the second year. If more than one scion is allowed to grow it will create a weak area in the trunk with multiple trunks developing, which, at a future date, may split out due to high winds, heavy snow, or ice loading.

11. Finally, over the next few years remove all limbs below the graft as the scion selection has time to grow and replace the top structure of the tree.

The grafting procedure for the bark graft is simple to perform and has a good success rate. Top working existing trees to improve selections or cultivars can result in higher yields or better quality nuts from a planting of existing nut trees for the fruit grower.

Phenoxy Herbicide Damage to Plants

by Patrick Byers

The phenoxy herbicides, which include 2,4-D, MCPA, Crossbow, Banvel, Garlon, Weed-B-Gone, and Brush Killer, are useful broadleaf weed herbicides. Widely used since the late 1940's, phenoxy herbicides are labeled for use on many agronomic crops, turf plantings, and several fruits. In the case of strawberries, formulations of 2,4-D are used to control broadleaf weeds at specific times during the growth cycle – at renovation and in the early spring. 2,4-D can cause damage to strawberry plants if improperly used, and growers are advised to closely follow label

recommendations. As an example, if applied in the late summer or early fall, 2,4-D can cause distorted flowers and fruit the following season. Another recommendation is to remove the foliage of plants sprayed with 2,4-D at renovation.

While phenoxy herbicides are useful when properly applied, severe damage to susceptible plants can occur from the misuse of these herbicides. Grapes, Solanaceous crops (tomato, potato, pepper, eggplant), brambles, and many ornamentals are extremely sensitive to herbicides containing phenoxy compounds. These plants may be damaged by misdirected applications. More commonly, however, damage is caused by drift from offsite applications. 2,4-D is prone to volatilize and become a vapor, which can move some distance away from the application area. Conditions that favor volatilization include the use of the ester form of 2,4-D, spraying under warm conditions (temperatures above 70-75°), spraying under windy conditions, and spraying at high pressures (which causes a fine mist).

Symptoms of phenoxy herbicide injury are often most dramatic on the youngest leaves and tips of growing shoots. Affected leaves may be curled, narrow, cupped, small, thickened or leathery, and



Distorted grapevine growth caused by exposure to 2,4-D.

may develop a characteristic fan shape. Shoots may curl. With grapes, flowers are particularly

susceptible to injury and set few or no fruit. Exposure after fruit set can lead to uneven ripening. The eventual prognosis depends on the degree of exposure. Plants with a slight amount of injury usually outgrow the damage. Moderate damage can adversely affect plant performance. Severe damage can result in plant death. Perennial crops such as grape may exhibit symptoms for several years after the initial exposure.

Strawberry growers who are contemplating the use of phenoxy herbicides should take precautions to minimize the risk of damage to non-target plants. Check product labels carefully, and use amine formulations of 2,4-D which are less prone to volatilization. At present, only one 2,4-D label was found that included strawberry (Formula 40, an amine formulation). The renovation application is the application most at risk for volatilization, so consider carefully if you really need to apply 2,4-D at this time. If you do choose to use 2,4-D at this time, monitor wind speed and direction closely and try to apply under cool conditions. Add a spray-thickening agent to reduce spray drift. Apply 2,4-D with coarse nozzles at lower pressure and in the maximum amount of water as directed by the label. Weather conditions during the early spring application time is usually less favorable for volatilization, and susceptible crops are often either not present (annuals) or do not have susceptible foliage.

Be a good neighbor, and don't trespass with chemicals. Remember that you will be held responsible for potential damages, even if unintentional, if you choose to apply a product.

References:

Preventing Phenoxy Herbicide Damage to Grape Vineyards. <http://eesc.orst.edu/agcomwebfile/edmat/html/em/em8737/em8737.html>

Broadleaf Herbicide Damage to Plants. <http://www.oznet.ksu.edu/hfrr/extensn/problems/herbicid.htm>

Think Twice Before Using 2,4-D
<http://www.msue.msu.edu.vanburen/f24d.htm>

Fall - A Second Chance to Grow a Productive Vegetable Garden

by *Gaylord Moore*

By planning and planting a fall garden it is possible to have fresh vegetables up to and even past the first frosts. In fact many varieties of vegetables can be planted in late summer for fall harvests. Various succession plantings such as beans or corn can be harvested up until the first killing frosts. Cool season crops grow well during the cool fall days and can withstand light frosts. Timely planting is the key to a successful fall garden.

To determine the time to plant a particular vegetable for the latest harvest in your area, you need to know the average date of the first killing frost and the number of days to maturity for the variety you are growing. Choose earliest maturing varieties for late plantings. Here is a formula that will help you determine the number of days to count back from the average first frost date to help determine when to start your fall garden. This information is available on seed packets, or from your extension or garden center.

1. number of days to maturity (count from seed to transplant to maturity if you start your own seed indoors and transplant to the garden. If you buy the transplants, count the days from transplant to maturity. If you direct seed in the garden, then you count the days from seed to maturity.

2. the average harvest period

3. the "Fall factor" (about 14 days)

4. the "Frost Tender Factor" (for frost sensitive crops only, about 14 days)

The total of 1+2+3+4 will be the number of days to count back from the **average first frost date** to determine if you have enough time for a fall crop. You know your location better than anyone, but as an example, in the Southwest Missouri area I figure about October 20th as an average for a killing frost. It could be earlier for the most tender and later for the hardy plants.

The two-week "Fall Factor" takes into account slow growth that results from cool weather and short days in the fall and is used in all cases. The two-week "Frost Tender Factor" is **only** added for those crops that are sensitive to frost.

Pesticide Labels Online

by *Suzi Teghtmeyer*

Pesticide labels serve as invaluable tools in a myriad of ways. First, they are the key to the chemicals contained within, and link the right pesticide for both crop and pest control. Labels serve as a guide when seeking a new and better pesticide, displaying the chemical makeup, the mode of action, and the expected results. They provide the necessary information to calculate the total cost of the pesticide, supplying the cost of the container, the amount of pesticide within, and the amount and number of applications needed to control the pest throughout the season.

During the use of such chemicals, however, the label on the container can be disfigured beyond use. Short of buying a new container, the challenge is to find a replacement label. While addressing this issue, Dr. Martin Kaps and I came across two online companies that work in conjunction with pesticide manufacturers to provide labels over the Internet. The websites provide the labels and material safety data sheets (MSDS) in pdf format, viewed with the free Adobe Acrobat software. The one drawback is that not all chemicals and manufacturers are available online, and there are instances where the MSDS is available, but the label is not.

The first company is Crop Data Management Systems, Inc. (CDMS), <http://www.cdms.net/manuf/manuf.asp>. One can search for a particular pesticide two ways. Using the search box, type in the product or brand name, click search, and choices of the correct brand with manufacturer are presented. In columns to the far right are the available options of labels and MSDSs. Clicking on either of those will yield the link for the label page or MSDS page, both in pdf format. The second way to search is by selecting the correct manufacturer from the list, bringing up an alphabetical list of the chemicals produced by the company. Again, the label and MSDS options are presented. If there is nothing in one of the two columns, it of course means that the label or MSDS is not available.

The second website is Greenbook from C&P Press, <http://www.greenbook.net/free.asp>. Similar to CDMS, one can type in the brand name or select a manufacturer for a pesticide list. Greenbook also provides search capability for supplemental labels, whereas with CDMS, the labels are presented together. The results appear in tabular format similar to the CDMS site. After we had been working with the two sites for a while, Dr. Kaps and I decided to create a website linking to the label pages we reference most often. The CDMS site allows bookmarks directly to a label's website. Greenbook's site, however, utilizes a web program that disallows bookmarking to a specific label. Because of this, we utilized the CDMS website more for greater link accuracy.

At this time, the pesticide label page for viticulture has been completed, and the pages for other small fruits and tree fruits are under construction. The pesticides featured on this website come out of the *Missouri Commercial Grape Pest Control Guide*, the *Missouri Commercial Small Fruit & Grape Spray Guide*, and the *Midwest Small Fruit Pest Management Handbook*, *Ohio State University Extension Bulletin 861* (specifically, Chapter 4: Grapes). The same works, when relevant, are being consulted to create the other fruit/pesticide label pages. The address of the Pesticide Labels for Grapes is: <http://library.smsu.edu/paulevans/pesticides.htm>. This site is also a link of the new Viticulture website, also hosted by the Paul Evans Library of Fruit Science, <http://library.smsu.edu/paulevans/viticulture1.html>.

Classifieds

For Sale:

A 22 acre berry farm, pictured above and below, for sale in north-central Arkansas. Call 870-425-7028 or go to <http://www.smittysupick.com>.

Market Your Fruits and Vegetables Online

by *Gaylord Moore*

Are you searching for additional methods to market your fruits and vegetables? Market your produce online! Whether you own a computer and have Internet access does not matter, you may still use these services provided free of charge from the University of Missouri Outreach and Extension. Contact one of the Horticulture Specialists within your area of the State for more information on how to become listed in the computer directory or you may log on line and fill out an application at <http://agebb.missouri.edu/hortgrow/entryform.asp>. The Missouri Database Entry System allows the listed to give identity, location and list specific crops grown. You also can identify various systems of marketing such as u-pick, farmers market, roadside stand/on-farm market, wholesale, mail order, food buying cooperative or community supported agriculture. Check us out as another resource to move produce. The University needs your listing. News releases statewide will alert the public of how they can log on and locate fresh produce markets close to home.

Stark Bro's Nursery Closing

This article is based on a series run in July, 2001 concerning the Stark Bro's Nursery and used by permission of Walt Gilbert, Publisher, Louisiana Press-Journal, Louisiana, Missouri.

Saying it cannot continue normal operations while restructuring is in progress, the parent company of Stark Brothers Nurseries and Orchards, Foster and Gallagher, has cut the Stark staff to a skeleton crew. Crops are still being protected as the parent company is expected to be sold on August 14, 2001, the date requested for bid openings.

Business ceased on Friday, June 29. On Monday, July 2, Foster and Gallagher announced that 21 of its domestic subsidiaries had filed for protection under Chapter 11 of the United States Bankruptcy Code in the United States Bankruptcy Court for the District of Delaware, Mich.

Nearly all Stark Brothers employees were sent home Friday morning, June 29. Officials stated last week that the local company has approximately 300 people on their employee roster.

While the news, which followed at least a week of rumors and speculation, has hit Louisiana (in northeastern Missouri) and the Twin Pike County area with a hard blow, there is still at least a glimmer of hope for the company, the oldest and best-known nursery in the world.

“Foster and Gallagher is discussing options with bank leaders,” said company spokesperson Doug Morris on Friday. Those discussions however, fell short of a financial answer for the company. Morris stated Monday that, “The company said that it has been determined, however, that a sale of assets and an orderly wind-down of the businesses offered the best possibility of maximizing the creditors’ recoveries.”

Foster and Gallagher announced that it was substantially reducing its workforce at its operations

in Grand Rapids, MI, Peoria IL, Tipp City, OH, Piqua, OH, Knoxville, TN, Canada and the Netherlands, in addition to Louisiana, MO. The only location not affected is the Colorado Springs facility.

“The company has run out of money,” said Morris. “There have been meetings with bank lenders, but the company has been unable to find financing.”

Foster and Gallagher purchased Stark Brothers in 1994. Founded in 1816, Stark Brothers is known around the world for its nurseries and orchards, and primarily for its apples and fruit trees. In late 1995 a three acre greenhouse was constructed on the property.

Jack Alexander, the vice president and general manager of Stark Brothers, feels that there is light at the end of the tunnel, that a new owner will step forward, and that Stark Brothers will again continue to offer jobs locally and quality products around the world.

Missouri Blueberry Growers Survey

Please fill out this survey and send it to:

Jay Chism, President, Blueberry Council of Missouri

10801 State Highway 43, Webb City, MO 64870

Note that **your individual input in this survey will remain confidential**. This information will be used by the Blueberry Council of Missouri to construct a base line description of the Missouri Blueberry Industry in order to get a better understanding of our needs and to more accurately represent our industry.

Number of acres presently in production _____.

Total number of acres planted _____.

Pounds **per acre** produced in 2001 _____.

Name _____

Street Address _____

City _____ Missouri Zip Code _____

E-mail _____

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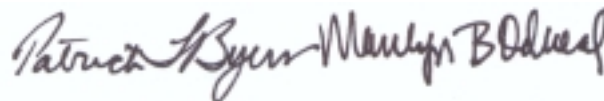
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