UtahState UNIVERSITY EXTENSION
UTAH COUNTY OFFICE
51 So. Univ. Ave., Rm 206
Provo, UT 84601
801-370-8460

Hinton AROUND

HORTICULTURE NEWSLETTER by Adrian C. Hinton,
USU - Utah County Horticulture Agent

"Extending the University to You" January - February 2000

GREETINGS FROM THE COUNTY AGENT

HAPPY NEW YEAR!

Greetings to each of you and the new year AND the new century!

What a great time to be alive... Even though there may be a few hopefully small glitches in our new year, there are so many good reasons and things to be grateful for.

USU Cooperative Extension has been in the business of helping families, individuals and companies (big and small) work through the tough times by providing timely and pertinent information.

As the new year descends upon us, Utah County Cooperative Extension will continue to do what we do best ... "Help you make your life easier and more productive." Please feel free to call or stop by the office and let us assist you in any of your educational needs. I do sincerely wish each one a very prosperous and exciting new year and century!!!

Adrian C. Hinton

TIMELY TIPS FOR THE SEASON

1. Be sure to watch your mail for information on the new Master Gardener Classes (Basic and Advanced) that will start soon!!!
2. Keep those beautiful Christmas plants looking their best with proper care and maintenance. (See article in this issue on Poinsettias).
3. Get your pruning equipment tuned up. The harshest part of the winter will soon be past.
4. Save your peach and plum trees till last in the pruning schedule. They could be damaged by a late, unusual drop in the temperature.
5. We have pruning fact sheets and pamphlets at the Extension office.
6. Roses and other perennials can be pruned now. Prune to fit your system and area.
7. Now is a good time to "Make a Growing Plan" for next year. Also order all your seeds and bare roots for the new season.
8. Soil testing should be done before you till and plant. We have soil test kits at the office. This is the best $10.00 you will spend on your garden for the next three years.
9. Be sure to attend the Utah Green Conference in St. George on January 26, 27, and 28, 2000.
10. Be sure to let the whole family get involved in planning the garden.
11. Have a great New Year!!

PLANTS

POINSETTIAS

Poinsettias were introduced in the United States in 1825 by Joel Roger Poinsett who was the first U.S. ambassador to Mexico. He was a botanist and he distributed this native Mexican plant to friends in the United States. In 1902 Albert Ecke started farming in California and with his sons developed the main varieties of poinsettias grown today.

Christmas Care

Place near a sunny window. Do not let the plant contact cold glass. Temperatures above 70° F. will cause shorter bloom life.

Avoid cold or hot air drafts; keep away from radiators and air registers. If possible, move to a cooler room (55-66° F.) at night.

Examine soil daily. Water when soil is dry to the touch. Always water enough to soak the soil to bottom of pot, and discard excess water.

Apply a 20-0-0 fertilizer at the rate of 1/4 teaspoon to one pint of water every 5-7 days.

After Flowering:
When about half the leaves and bracts have fallen off, gradually reduce water applications until the soil is completely dry. Store the dormant plant in basement at about 50° F. with little watering.

Summer Care
When the new growth start, cut back old stems to about 4" and repot. Fresh soil mix should be porous to allow free drainage: 2 parts soil, 1 part peat, 1 part sand.

After spring frost danger is past and night temperatures exceed 50° F., sink the poinsettia pot to the rim in a well drained position out of doors. Apply a 20-20-10 fertilizer once each month at the rate recommended by the manufacturer.

For a short branching plant pinch out the growing shoot tips when there are two fully expanded leaves on each shoot. Do not pinch after mid-August. For a tall plant do not pinch, or pinch once to obtain desired shape.

Fall Care
Take the poinsettia plant indoors at the end of August. Place in sunny position as before. Flowers will initiate only if plant is kept in complete darkness between 5:00 p.m. until 8:00 a.m. daily from the end of September until color shows in the bracts about mid-December. Night temperature should be between 60 and 70° F.

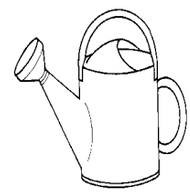
(Tooele Tidings, 12/99)

WATERING HOUSEPLANTS

The number one reason for dead, dying or unhealthy houseplants is improper watering, and in most cases the problem is not too little water but too much.

Plant watering should NOT become a daily, bi-weekly, or weekly routine. Plants vary greatly in their water requirements. Some plants have the ability to go for considerable periods without water, while others must be watered almost every other day to survive.

The best practice is to watch the soil of the houseplant itself. Whenever it becomes dry at the surface, provided the pot has proper drainage, the plant needs water. A hole in the bottom of each pot will help with proper drainage.



Water requirements vary from one season of the year to the next. Many houseplants require more water during the summer than they do during the fall season. Some plants need more water to insure a longer bloom time and a more robust bloom.

As a general rule it is best to observe houseplants often to ascertain their water requirements. Room temperature water is better than fresh tap water. Rain water offers little advantage over tap water. Pots must have drainage holes. Do not give houseplants water that has been softened with water softeners.

Some houseplant enthusiasts lift the potted plant from time to time to determine when watering is needed. The potted plant becomes lighter as water is used or evaporated. Signs of over-watering include: yellow wilting leaves, leaf tips turning brown and fungus gnats (a very small black flying insect that requires damp conditions to reproduce).

(Iron County Extension Service)

WEEDS

WATCH OUT FOR THIS ONE!
DON'T LET IT GET A TOEHOLD IN UTAH COUNTY!

YELLOW NUTSEDGE is sometimes mistaken for a grass, but is a member of the sedge family. Nutsedge is a perennial that forms tubers. Once established, it is a tough weed to eliminate (especially in wet areas). The best herbicides for control are Manage and Basagran T.O. This late in the season neither can be expected to give great results since tubers have already developed. Mowing will reduce seed and future infestation. Plan to apply herbicides if necessary next year in late spring or early summer. This is a rare one in Utah County. We want to keep it that way!!

WINTER ANNUALS are weeds that germinate in fall or early spring and then die in summer. The most familiar winter annual is common chickweed. Corn speedwell and henbit are also common. Generally, they infest weak, thin turf. Again, the best management tactic is good culture (increase turf density). Severe infestations can be addressed with either pre-emergent or post-emergent herbicides. Labeled pre-emergent products for chickweed include pendimethalin (Pre-M), Dimension and Barricade. These products must be applied before weed germination in late summer or early fall. Dichlobenil (Casoron, Norasac, Dyclomec) will control small winter annuals, along with certain perennials such as quackgrass and mugwort if applied in established woody ornamental beds.

Get Ready for Spring!

THATCH CONTROL: Lush turfgrass growth is the major cause of thatch accumulation, occurring when the rate of decomposition of stolons and rhizomes cannot keep up with new thatch formation. Excessive thatch harbors insects and disease, slows movement of water, fertilizer and pesticides and promotes shallow rooting. It can destroy turf if not properly managed, especially under drought conditions.

Microorganisms and earthworms naturally decompose thatch. Organic matter, pH, water, temperature, and aeration influence their activity. Manipulating these factors can stimulate microbes that reduce thatch. Increasing organic matter can be achieved by using organic fertilizers and organic soil conditioners. Topdress turf in the fall by adding up to 1/2 cubic yard of compost/1000 square feet. Acidic soil conditions have been shown to promote the accumulation of thatch.

Core aeration and/or verticutting reduces thatch by increasing oxygen levels to turf roots, and thus increasing microbial activity (cores can also be dragged as a topdressing). Adequate watering (not excessive) keeps the thatch moist, which also hastens decomposition.

(Source: Landscape Management, 1/93)

BUG THUGS of the MONTH

GRUB CONTROL CONFUSION

Mach2, the new Molt Accelerating Compound (halofenozide), forces a larva into a molt before its normal time. Since second and third stage instar grubs have to molt in order to continue development, Mach2 works well in late summer. However, third instar grubs in the fall usually stop feeding when exposed to Mach2, and then die slowly. The bottom line: Treat with Mach2 during July or early August as a grub early curative treatment. This holds true for masked chafer grubs as well as June beetle grubs.

(Source: The P.E.S.T. Newsletter)

EARWIGS STAGE INVASION OF PEACH ORCHARDS

by Dr. Rick Zimmerman, Research Entomologist

In recent years, populations of the European earwig, *Forficula auricularia*, have been on the increase in vegetable plots, flower gardens and orchards. In particular, earwigs have become a major economic pest in organic peach orchards. In 1998, some organic peach orchards sustained an estimated 18-20% damage.

The European earwig was introduced to the United States in the early part of this century and is now found in most parts of the country. In some places, it is found in extreme numbers, most likely due to lack of or a minimal number of natural enemies. Earwigs overwinter as pairs of adults in subterranean cells. Females begin laying eggs in the early spring in earthen wells, readily observable under rocks, boards, etc. Males are found in the proximity of the nests, but are not allowed into the nest (males have bowed pincers, while females have straight pincers). The female guards the eggs until they hatch (late April to early May). The female stays with the nymphs, leaving the nest at night with the nymphs to forage. The female eventually leaves the nest when the nymphs fail to return to the nest. In late June the female will then lay a second batch of eggs. During daylight hours earwigs hide out in secluded areas under debris, flowers, clusters of fruit, etc. At night they emerge to feed. Earwigs are opportunists when it comes to eating. In some cases they serve as superb natural enemies, feeding on a range of insects. In codling moth infested apples, earwigs will follow tunnels created by codling moth larvae, locate and consume the larvae. But they will also feed on plants, which many times brings them into direct conflict with the gardener and orchardist. In peach orchards, the earwigs invade the trees in large numbers, literally a few days before harvest. It was thought that earwigs would only feed on peaches which were bird damaged or had a split pit, but, much to the chagrin of the organic orchardists, earwigs have been observed to create their own feeding sites. The extent of the damage is great enough that the fruit is left unmarketable.

An adequate organic control has proven elusive. Growers have tried banding trees with wide bands of yellow sticky tape plus a couple inches of sticky Tanglefoot above and below the yellow band. The bands did not prevent the earwigs from reaching the peaches. The earwigs are more than likely flying into the tree. Considering that earwigs are nocturnal, observations of flying earwigs would be almost impossible. Diazinon granules are a good nonorganic control. Follow directions on the label. The use of entomogenous nematodes is being investigated as a potential control agent.

Entomogenous nematodes are parasitic nematodes which can be used for control of a wide range of insect pests.

BOXELDER BUGS

Large populations of boxelder bugs this year are associated with female boxelder trees and silver maple trees (euonymus is also a reported host). During the fall, these insects can be alarming to homeowners who see large numbers congregating at the base of tree trunks, woodpiles or the south side of light colored buildings. This gathering stage is followed by a flight period to overwintering sheltered places. These insects are nuisance pests when they invade buildings in the fall to overwinter. There is only one generation each year. Control strategies call for the removal of female boxelder trees. Insecticidal soap applications will suppress populations if sprays are necessary. Many synthetic pesticides are labeled for controls.

CDC DATA PROVIDES MOST COMPLETE ESTIMATE TO DATE ON FOODBORNE DISEASES

The Centers for Disease Control and Prevention (CDC) recently released the most complete estimate to date on the incidence of foodborne disease in the United States. According to data published in a recent tissue of "Emerging Infectious Diseases," foodborne diseases may cause an estimated 76 million cases of gastrointestinal illnesses, 325,000 serious illnesses resulting in hospitalizations and 5,000 deaths each year.

According to CDC, these are the most complete estimates ever calculated and should not be compared to previous estimates since the estimates are a result of better information and new analyses rather than changes in disease frequency over time. These new estimates provide a snapshot of the problem and do not measure trends and do not indicate that the problem is getting better or worse. In addition, these new estimates include some diseases that were not included in previous estimates, such as those caused by E. coli 0157:H7 and Norwalk-like viruses.

Although the U.S. food supply is among the safest in the world, the nation increasingly faces new food safety challenges. Novel pathogens are emerging, and familiar ones are growing resistant to treatment. Since 1942, the number of known food-borne pathogens has increased more than five-fold. American consumers eat out more and cook for themselves less. They eat more processed food than ever before, involving more people and more preparation, thus increasing the chance for disease-producing food-handling errors. In addition, because baby boomers are aging, thus increasing their vulnerability to food-borne disease illness, the number of people most vulnerable to food-borne disease continues to grow.

(Source: USDA, 10/4/99)

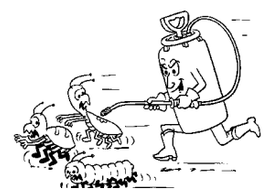
BIOPESTICIDES AND THEIR ACTIVE INGREDIENTS

Biopesticides (also known as biological pesticides) are certain types of pesticides derived from such natural materials as animals, plants, bacteria and certain minerals. For example, canola oil and baking soda have pesticidal applications and are considered biopesticides. At the end of 1998, there were approximately 175 registered biopesticide active ingredients and 700 products. Biopesticides fall into three major classes:

(1) *MICROBIAL PESTICIDES* contain a microorganism (e.g., a bacterium, fungus, virus or protozoan) as the active ingredient. These pesticides can kill many different kinds of pests. For example, there are fungi that control weeds, other fungi that control cockroaches and bacteria that control plant diseases. The most widely used microbial pesticides are various types of the bacterium *Bacillus thuringiensis* (Bt), which can control specific insects in cabbage, potatoes and other crops. Another type of Bt kills mosquitoes, but is ineffective against crop pests. Bt acts by producing a protein that kills larvae of specific insect pests.

(2) *PLANT PESTICIDES* are pesticidal substances that plants produce from genetic material that has been added to the plant. For example, scientists can take the gene for the Bt pesticidal protein, and introduce the gene into the plant's own genetic material. Then the plant, instead of the Bt bacterium, manufactures the substance that destroys the pest. Both the protein and its genetic material are regulated by EPA; the plant itself is not regulated.

(3) *BIOCHEMICAL PESTICIDES* are naturally occurring substances that control pests by non-toxic mechanisms. Conventional pesticides, by contrast, are synthetic materials that usually kill or inactivate the pest. Biochemical pesticides include substances, such as pheromones, that interfere with growth or mating of the pest. Because it is sometimes difficult to determine whether a natural pesticide controls the pest by a non-toxic mode of action, EPA has established a committee to determine whether a pesticide meets the criteria for a biochemical pesticide.

Biopesticides offer several advantages. Biopesticides are usually inherently less harmful than conventional pesticides. Biopesticides generally affect only the target pest and closely related organisms, in contrast to broad spectrum, conventional pesticides that may affect organisms as different as birds, insects and mammals. Biopesticides often are effective in very small quantities and often decompose quickly, thereby resulting in lower exposures and largely avoiding the pollution problems caused by conventional pesticides. When used as a component of Integrated Pest Management (IPM) programs, biopesticides can greatly decrease the use of conventional pesticides, while crop yields remain high. To use biopesticides effectively, however, users need to know a great deal about managing pests.

Since biopesticides tend to pose fewer risks than conventional pesticides, EPA generally requires much less data to register a biopesticide than to register a conventional pesticide. In fact, new biopesticides are often registered in less than a year, compared with an average of more than 3 years for conventional pesticides.