



LARAMIE COUTNY MASTER GARDENER NEWSLETTER

UW Cooperative Extension Service



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Inside this issue:

Fungus May Stop 2
Ash-Killing Beetle
&
Colorado Potato
Beetle

Guayule: A 3
Source of Natu-
ral Rubber

Winners of 4
Mothers day
raffle
&
Residue
Tolerances for

Cucumber Beetle 5

Up coming Events 6

You won't believe this one.

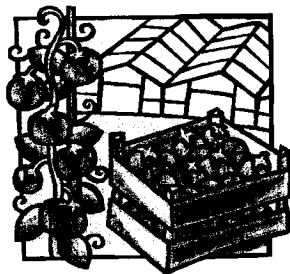
A client wanted to know how he could get tomatoes all season (plant a variety of "dates to maturity" and/or use hoop houses), and why he didn't get any fruits last year until September/October. His neighbor had good production throughout the season, but he didn't get anything until late, and very few ripened, even on the Silvery Fir Tree.



I told him I suspected too much Nitrogen and to get a soil test. His response is below.

Last year I had almost all of my tomato plants in giant pots. I used miracle grow garden soil mix with leaf compost. Every other week I watered with miracle grow. That was one of the reasons I didn't get my soil tested. I had 15 pots and four raised garden beds. I didn't want to test all of the different soils that I had. We have been saving all of our household compost for the last 8 months as well as grass clippings and leaves. Then early this fall I topped it off with some organic cow manure. Once it thaws I will mix it up and have it tested. If I do have a nitrogen problem how would I dilute it?

I responded that if he loved his tomatoes to death, he needs to get the soil test done, lay off the Miracle Grow, and we'll figure out what he needs to do after we get the soil test results back. Sounds like he may need to bring in some plain old top soil and mix it in, but we'll wait for the test results. This poor guy is trying so hard, and he just keeps overdoing things. Those raised beds he's talking about are ones he built last year--three feet high. His question to me last year was what did he need to fill them up with. My response was "there's a reason you don't build raised beds three feet high" and "do you have a step ladder tall enough to pick tomatoes off a 6 foot tall indeterminate tomato plant raised three feet off the ground"? He cut the height back. I'll keep trying to work with him. He wants to garden so badly, but he just keeps making mistakes--hope he doesn't get frustrated and quit before he gets the hang of it.





FUNGUS MAY STOP ASH-KILLING BEETLE

Beauveria bassiana, a soil borne fungus already used for keeping many insect pests check, is being eyed as a possible control for this invasive beetle that has already killed more than 20 million ash trees in Michigan, Ohio, Indiana, and Ontario.

"Agricultural Research Service (ARS) entomologist John Vandenberg and colleague want to know how well a commercial strain of *B. bassiana* stands up to the emerald ash borer after repeated applications. They are also seeing if this strain, called GHA, will work better if used with the commercial insecticide imidacloprid.

B. bassiana spores kill insects by attaching to them, germinating, and penetrating their hosts' bodies. The spore can survive to infect later pest generations. *B. bassiana* is used against a variety of insects, including termites and white flies.

The emerald ash borer is thought to have entered North America during the 1990s in solid wood packing material from Asia. Its immature larvae feed on the vascular-system tissue of ash trees.

First spotted here in 2002 near Detroit the destructive beetle, has since cost municipalities, property owners, nursery operators and forest products industries tens of millions of dollars, according to the U.S. Forest Service (USFS). Infestations were recently found in the Chicago area.

According to Vandenberg, of the ARS Plant Protection Research Unit (PRRU), Ithaca, New York, preliminary studies led by USFS scientist Leah Bauer have shown that the beetle is susceptible to *B. bassiana*. However, the fungus' effectiveness in larger field trials has not yet been proven.

At a commercial tree nursery near Jackson, Michigan, Vandenberg, Bauer, PPRU entomologist Michael Griggs II, Cornell University scientist Louela Castillo and Michigan State University researcher Houping Liu are studying the performance of the fungus on about 400 ash trees in three planting areas.

A possible strategy against the beetle would entail spraying the fungus on trees before the pests' spring mating season, according to Vandenberg.

Traders Dispatch, May 2007

COLORADO POTATO BEETLE

Colorado potato beetle over winters as an adult in the soil, in fencerows, or under litter in gardens or fields. Adults become active in May and will start to lay eggs as soon as suitable host plants are found. Adult beetles are yellow with ten black longitudinal stripes on their rounded wing covers. They are about 3/8 inch long. Clumps of 20 to 40 yellow orange eggs are laid on the undersides of the leaves. Larvae hatch from the eggs in 4 to 15 days. The hump-backed larva has six legs and is about 1/8 to 1/2 inch long. It has reddish-tan to brick-red coloration with two rows of black spots on each side.

Larvae and adults feed on the foliage of the host plants and can cause extensive damage if populations are high. Feeding occurring within two weeks of peak flowering on potato's will have a pronounced effect on the yield.

Hand-picking is possible on small plantings but becomes impractical for larger gardens.

Agriculture Research Service scientists have discovered a pheromone produced by male Colorado potato beetles but attractive to both sexes--that may lead to new environmentally sound pest management methods to protect potatoe. The Colorado potato beetle is the potato crop's most destructive pest, costing growers millions of dollars annually in crop losses and expenditures for synthetic pesticides.

The Colorado potato beetle rapidly develops resistance to synthetic pesticides, many of which are now being re-evaluated by regulators. The pheromone, however, is a natural byproduct of the beetle's metabolism, so the evolution of resistance to it is unlikely. Using the pheromone as a natural chemical for luring and killing the beetles may one day lessen the amount of synthetic insecticides required for pest control.

For 75 years, scientists in the United States, Canada and Europe have searched for scents that attract the Colorado potato beetle. The generally accepted view had been that a pheromone attractant would be found in females. Thus, the discovery of the attractant in males provides a new model for this beetle's chemical communication.



GUAYULE: A Source of Natural Rubber

Natural rubber is a commodity that accounts for an annual import deficit of nearly \$1 billion for the United States. Over 2,000 rubber producing species are known, however, only two, *Hevea brasiliensis* (A. Juss.) Muell.-Arg. and guayule (*Parthenium argentatum* Gray), have been exploited as commercial sources of natural rubber. Today, *Hevea* is essentially the sole source of natural rubber, nevertheless, active research and development programs are underway to domesticate and commercialize guayule. Guayule is envisioned as a new or alternative crop for arid and semiarid areas of the south-western United States, north central Mexico, and regions with similar climates around the world.

Although *Hevea* is the dominant rubber crop today, *Hevea* and guayule have had parallel histories of development. In both, commercialization began with the harvest of wild stands before the establishment of plantations and the initiation of cultural studies. Variability within stands and lowered yields per unit area were problems in both species. These problems continued through the early attempts at cultivation since the populations were very heterogeneous genetically due to their establishment from open-pollinated seed. Annual yields have been increased dramatically in both, from 400 to over 2,000 kg/ha for *Hevea*, and from 300 to 1,000 kg/ha for guayule. The differences in development between the two crops can be associated with the initiation of the Rubber Research Institute of Malaya, in 1925. The Rubber Research Institute has been responsible for over 60 years of continuous increases in *Hevea* yields and the production of a uniform and reliable industrial product. Guayule, on the other hand, has suffered from intermittent research efforts, which have in many cases been undermined by periods of neglect. Guayule researchers have found themselves more than once in the position of "reinventing the wheel."

HISTORY Guayule has been known as a source of rubber since the pre-Columbian times when Indians of Mexico used it to form balls for their games. In the early 1900s, guayule was first considered as an alternative source of natural rubber in the United States because of the high price of *Hevea* rubber from the Amazon region.

CULTURAL PRACTICES Guayule is adapted to hot desert environments, and sites with well-drained calcareous soils and relatively low concentrations of nutrients. Sandy-loam soil are most suitable since root diseases, which are exacerbated by standing water, are one of the few problems encountered in guayule cultivation.

Presently, stand establishment is accomplished by transplanting. Seeding transplants are produced in greenhouses and fields are established using typical commercial transplanting systems. Transplanting has been extremely successful, but is estimated to be more expensive than establishment by direct-seeding. Direct-seeding has been successful on an experimental scale, but no commercial scale plantings have been attempted.

PROCESSING Effective processing of rubber and non-rubber co-products is essential to a viable guayule industry. Rubber in guayule is found in the parenchyma cells, mainly in the bark, and must be released during processing.

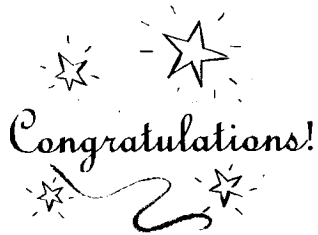
The first and oldest method is flotation. This is essentially the same methodology used at the turn of the century and during the Emergency Rubber Project. In this procedure, ground shrubs are placed in a large vat of diluted sodium hydroxide until the woody tissue takes-up water and sinks to the bottom and the resinous rubber floats to the top in what are called "worms." These worms are skimmed from the top and the rubber is deresinated with acetone. The second method is sequential extraction, in which the resin is first extracted with acetone or another polar organic solvent, and then the rubber is extracted with hexane. The third processing method is simultaneous extraction, in which a mixture of solvents, usually acetone and hexane or pentane, are used. After the initial extraction, more acetone is added to coagulate the high molecular weight rubber. This method has been used by Texas A&M University and Bridgestone/Firestone Corporation.



**Gloves
made from
the guayule
plant.**

CONCLUSIONS There currently is a group of dedicated researchers who are working to understand and improve guayule towards the goal of one day being able to supply a domestic source of natural rubber.

<http://www.hort.purdue.edu/newcrop/proceedings1993/v2-338.html>



Winner's of the Mother's Day Raffle:

1st was Diana Twine
2nd was Barb Fryman
and 3rd was Dorris Noakes



SATURDAY MAY 19TH WAS THE MASTER GARDENER 18TH ANNUAL PLANT SALE AND SPRING GARDEN SHOW AT THE CHEYENNE DEPOT. IT WAS THE ULTIMATE DAY FOR THE EVENT. THERE WERE SIX LECTURES ON BASIC GARDENING, ORGANIC GARDENING, TREES, TURF AND LANDSCAPE THAT WENT SPLENDIDLY.



An addiction to gardening is not all bad when you consider all the other choices in life.....Cora Lea Bell



Residue tolerances for Malathion sharply reduced

Codex Alimentarius, the international standards-setting body for pesticide residues, has adopted new, sharply reduced tolerances for malathion residues on wheat and wheat flour of 0.5 ppm and 0.2 ppm, down from the previous tolerances of 8.0 ppm and 2.0 ppm,

The reduced tolerances reflect the end of acceptance of the use of malathion as a post harvest stored grain protectant on wheat. While the U.S. Environmental Protection Agency (EPA) withdrew the registration of malathion for this use several years ago, EPA permitted any remaining stocks to be used, and surveys of wheat samples for pesticide residues continue to show presence of malathion.

With the adoption of the reduced tolerances by Codex, growers and handlers now need to avoid any further use of malathion on wheat even if they still have stocks of the chemical, as many wheat importing countries either enforce.

If corn oil is made from corn, and vegetable oil is made from vegetables, what is baby oil made from?



Why is it that people say they "slept like a baby" when babies wake up like every two hours?

3 Bean Salad

3 Bean Salad:

- 1/2 pound fresh green beans, washed and cut into 1/3
- 2 rounded teaspoons Dijon mustard
- 2 teaspoons sugar
- 1/4 cup red wine vinegar, eyeball the amount
- 1/2 cup extra-virgin olive oil, eyeball the amount
- 1 (15-ounce) can red kidney beans, rinsed and drained
- 1 (15-ounce) can garbanzo beans, rinsed and drained
- 1/4 cup flat-leaf parsley, chopped
- Salt and freshly ground black pepper



In a bowl, combine mustard, sugar and vinegar. Whisk in oil. Add kidney beans, garbanzo beans, green beans and parsley to the bowl and toss to coat bean salad evenly with dressing. Season salad with salt and pepper, to taste, and serve.

CUCUMBER BEETLE



The striped cucumber beetle is about 1/5 inch long with a black head and wings striped with yellow and black. The spotted cucumber beetle is about 1/4 inch long and has a black head and black legs with a yellowish-green body and wing covers with 12 distinct black spots. The larva stage of both species lives in the soil and feed on the underground parts of plants.

We're on the Web!!
www.laramiecountymastergardeners.com

Cucumber beetles are chewing insects and may attack cucumber, bean, melon, squash and pumpkin. In addition, the spotted cucumber beetle feeds on asparagus, corn, and eggplant. These insects are destructive to new seedlings just pushing through the soil. Later in the season, the adults feed on leaves, blossoms, and fruits. As they feed on crops, cucumber beetles may spread bacterial wilt and mosaic, two serious diseases of vine crops. Either the disease or the feeding may cause serious damage or complete crop loss.

Control, Non-chemical: At planting time in spring, cover vine plants with polyester row covers to protect them from cucumber beetles. Remove row covers when blossoms appear, to allow pollinating insect's access to the flowers.

Just a little trivia!!!!



Not all carrots are orange? The first carrots originated some 5,000 years ago and were white, purple, red, yellow, green and black. The orange carrots we find in the supermarket come from a variety bred in the 1700's by the Dutch. And did you also know that three carrots give you enough energy to walk three miles....if cows eat too many carrots their milk tastes better... all brides should be given carrots because it supposedly brings luck in the kitchen.

During the Alaskan Klondike gold rush, (1887-1898) potatoes were practically worth their weight in gold. Potatoes were so valued for their vitamin C content that miners traded gold for potatoes. In fact, there is even a potato called Yukon Gold.



July

Monthly Tips

- Irrigate gardens in the morning, after the dew has dried. Avoid overhead watering.
- Prune tomatoes for air circulation. Pinch vine ends on indeterminate or heirloom varieties.
- Stake tall growing flowering plants such as delphiniums, hollyhocks or lupines.
- By July 4th, finish pinching off the top 25 percent of all mum plants. This encourages more compact growth and flowers.
- Watch for signs of spider mites on evergreens.
- Look for damage to vegetables by Mexican bean beetle and Colorado potato beetle larvae.

August

- Harvest potatoes, onions and garlic as the tops die down.
- Prune away excess leaves and flowers on vegetable crops to channel energy into remaining fruits.
- Do a final pruning of suckers at the base of trees.
- Begin planting cool season leaf or root crops for fall harvest.
- Wilting in raspberries are most evident this time of year due to cane boring insects.
- Cluster flies will begin to seek out buildings as an over wintering shelter.

September

- Harvest winter squash when the "ground spot" changes from a white to a cream or gold color.
- Aerate lawns for more effective water and fertilizer use. Fertilize the lawn at this time to develop roots for next year.
- Move perennials as temperatures begin to cool.
- Decrease watering; plants need time to harden off before the cold sets in.
- Crickets will start moving into homes as the weather cools.
- Overripe fruits will become homes for fruit flies.



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Up Coming Events

- Wednesday, July 18th: Master Gardener Meeting at 716 W 19th St, 6:30 pm.
Deadline for Fair Entry Forms for Open Class
- August 4th to the 11th: County Fair, www.laramiecountyfair.com
- August 5th: Open Class Fair Entries due before noon.
- August 8th: Open Class Fair Entries pick up from 5 to 7 pm.
- August 11th to the 18th: State Fair, www.wystatefair.com
- Wednesday, August 15th: Master Gardener Meeting and Picnic
- Saturday, August 25th: Field trip to Table Mountain Vineyards
- Wednesday, September 19th: Master Gardener Meeting at 716 W 19th St, 6:30 pm. Speaker
- Wednesday, October 17th: Master Gardener Meeting at 716 W 19th St, 6:30 pm.
- Saturday, November 10th: Master Gardener class of 2007 Graduation
- April 26th & 27th, 2008 Wyoming Master Gardener Conference in Cody, WY