Master Gardener Newsletter

New Mexico State University
Cooperative Extension Service
US Department of Agriculture
College of Agriculture & Home Economics

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Inside this issue:

TIP FOR GREENHOUSE GROWERS: ADD SILICON

Modern greenhouse production methods have often eliminated conventional earth as a growth medium and, with that, eliminated silicon, a mineral naturally found in soil.

Greenhouse growers might do well to add silicon back in their nutrient applications, irrigation or potting mixes, according to Agricultural Research scientists. That's because a growing body of research suggests that silicon boosts yields and protects plants from toxicity and fungal diseases. This means silicon may reduce the need for plant growth regulators and disease-control pesticides.

Over the past three years, horticulturist Jonathan Frantz and plant pathologist Jim Locke with the ARS Greenhouse Production Research Group in Toledo, Ohio — along with other ARS and University of Toledo colleagues — have studied silicon uptake in a variety of ornamentals, including begonia, carnation, geranium, impatiens, marigold, orchid, pansy, petunia, snapdragon, verbena and zinnia.

X-ray analysis has shown that some of these plants— such as New Guinea impatiens, marigold and zinnia — accumulate silicon in significant concentrations in unique cells in their leaves. The researchers want to see which crops put nutrients where they are most useful to the plant.

The scientists also tested some of these plants to see if silicon imparts resistance to two widespread pathogenic fungi, gray mold and powdery mildew. They found that it helps reduce symptoms of powdery mildew in zinnia but has no effect on species such as begonia and geranium, which do not accumulate silicon.

The scientists will continue to use similar tests to see if silicon accumulates in the leaves of other ornamental crops and test those crops for silicon-induced resistance to insect pests.

Such knowledge about plants' silicon use will help breeders choose promising lines for creating new varieties of flowers and ornamental plants that will need fewer pesticide applications.

Read more about the research in the May/June 2007 issue of Agricultural Research magazine, available online at: http://www.ars.usda.gov/is/AR/archive/may07/plants0507.htm

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SPECIAL NOTICE

Barbara needs a someone to help with set up for the Home Show on Friday June 1—3 to 6 pm. Three slots are also open for June 2, 4 to 8 pm. Please sign up now.

NEW LETTUCES SHRUG OFF VERTILLIUM WILT

Fresh, crunchy iceberg lettuces sometimes collapse like a deflated ball before they have a chance to form their familiar firm, nicely rounded heads.

The cause? A disease known as verticillium wilt, which results from attack by a soil-dwelling, root-rotting fungus called Verticillium dahliae. But Agricultural Research Service (ARS) scientists at Salinas, California, have teamed with University of California-Davis colleagues to produce the first-ever parent iceberg lettuces resistant to this destructive wilt.

Lettuce is one of America's top five most popular vegetables. Iceberg lettuce outsells all other kinds of this versatile leafy green.

Ryan J. Hayes, a research plant geneticist with the ARS US Agricultural Research Station in Salinas, plant pathologist Krishna Subbarao at UC-Davis, and their colleagues made seeds of the three new parent lettuces available to researchers and plant breeders for the first time this April. They published additional details about Verticillium wilt resistance in a recent issue of Plant Disease, a scientific journal.

More than a half dozen companies that produce vegetable seeds have requested seed samples, according to Hayes. He noted that the parent lines are meant for crossing with consumer-ready lettuces to boost the commercially grown lettuces' resistance to verticillium wilt.

Breeding lettuces with natural resistance remains the most environmentally friendly, economical and sustainable option for combating the fungus.

Verticillium wilt first showed up in some coastal California lettuce fields in 1995. Researchers invested more than a decade in scrutinizing promising lettuces in greenhouse and field tests before determining that the new parent lines were ready for plant breeders everywhere to use.

The V. dahliae fungus infects roots of vulnerable plants, moving into leaves and causing them to discolor, then to eventually wilt and die. The fungus can also infect and kill hundreds of others types of plants, including strawberries and tomatoes.

The California Lettuce Research Board at Salinas, the California State Department of Food and Agriculture at Sacramento, and others helped fund the research.

POSSIBLE NEW CONTROL FOR WHITEFLIES DISCOVERED

An unusually durable fungus that was first spotted on tiny insects feeding on eggplants in Texas may become a new biological control for the widespread and costly agricultural pests known as whiteflies.

The fungus was first isolated by Agricultural Research Service (ARS) entomologist Enrique Cabanillas, working with entomologist Walker Jones at the ARS Beneficial Insects Research Unit, Weslaco, Texas.

The silverleaf whitefly, Bemisia argentifolii (previously know as B. tabaci biotype B), may be small in stature, but it can be deadly as a pest—sucking and feeding on the juices of a myriad of host plants. Heavy feeding can give plants under attach a yellow mottled look and eventually kill them. Whiteflies cause major crop losses, both directly by feeding and indirectly by transmitting plant viruses.

Pesticides have been ineffective for controlling whiteflies because of a built-in natural resistance, the need for repeated applications and the potential hazard some insecticides may pose to the environment, animal life or humans.

Isolated by Cabanillas in 2001, the new fungal species has been named Isaria propawskii. In the Lower Rio Grande Valley of Texas, it has been show to kill both larval and adult stages of silverleaf whitefly. In fact, since 2001, it has periodically wiped out whiteflies at the ARS insect-rearing facilities in Weslaco.

Notable aspects of I. propawskii include its natural establishment in a semiarid region where temperatures can reach 107 degrees Fahrenheit— and its continuing persistence, even in the absence of insect hosts. A high spore production in common culture media makes this fungus comparatively easy to grow in vitro, in the laboratory.

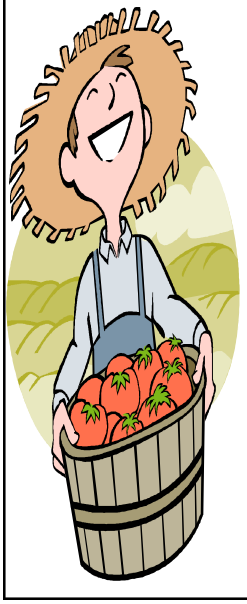
These features, plus its high pathogenic potential against a second major insect pest– the glassy-winged sharpshooter, Homalodisca vitripennis (previously know as H. coagulate) — make the I. propawskii fungus a promising candidate for practical biological control of two major U. S. farm pests.

Read more about this research in the May/June 2007 issue of Agricultural Research magazine, available online http://www.ars.usda.gov/is/AR/archive/may07/fungus0507.htm

Happy Birthday!!!

May 6
Annette Froehlich
May 13
Dixie LaRock
May 20
Ann Palormo
May 21
George Wilson
May 28
Alice Doss

TOMATO WIT . . . . . .



Why did the Tomato go out with a prune?

Because he could not find a date!

How do you fix a broken tomato?

Tomato paste!

Why was the tomato blushing?

Because it saw the salad dressing.

Shopper: I'm looking for STEWED Tomatoes.

CLERK: Try the salad BAR.

May Garden Tips By Ann Fair

TREES & SHRUBS: If you shear your hedges, never take off more than one-third of the growth. The top should be more narrow than the base so the sun reaches all areas. Mulch around trees and shrubs.

How to control the size of a large shrub.....You can control how large a shrub becomes by how much water you give it and how much you fertilize it. Once a shrub has become as large as you need it, reduce the amount you fertilize it significantly. Fertilizer is, after all, added to promote growth and if you no longer need a plant to grow quickly, slow it down.

The same is true of water. One of the advantages of well-adapted plants in any region is that when mature, they need little supplemental irrigation beyond what is provided naturally. Take advantage of this trait and water shrubs only enough to keep them healthy once they are full-size (Gardening in the Desert Southwest)

ROSES: Fertilize your rose bushes. Plant container roses after the last frost.....around the end of April.

LAWN: Water regularly and deeply. Albuquerque and south, seed any dead areas in your lawn caused by disease or insects.

Fertilize warm season grasses in lower elevations and cool season grasses in higher elevations. Mow lawn to no less that 2" and never cut any more than one-third of the growth in a single cutting.

If you are interested in planting a SALSA GARDEN, check the Newsletter for May under the KITCHEN GARDEN and it will give you all of the info you need. Don't over-crowd your plants. Air circulation is important and disease is less likely to spread.

TOMATOES: If you are growing tomatoes for the first time, start by purchasing the more common varities found in garden centers: Early Girl, Better Boy, Champion, Celebrity, Ace, Sweet 100, Big Boy, Yellow Pear, San Marzano, and Roma VF.

Harden off the plants for a few days on a porch or protected area outside, then plant in prepared soil in the full sun. Plant up to the first set of leaves, and follow the tag for spacing between plants. Place extra-large cages around the tomatoes after the second week. (The tomatoes will eventually grow into them) Tomatoes need plenty of water and consistently warm weather. The soil must be kept evenly moist to produce the best fruit.

VINES: The following vines grow well in New Mexico: Virginia creeper, silver lace, English ivy, wisteria (in lower elevations,) clematis, honeysuckle, woodbine, Boston ivy, and grape.

Trellis climbing vines for show, easier maintenance, and to keep them from crowding out other plants, trees and shrubs.

Allow for airflow on trellises near buildings, especially on the hot south or west exposures. (Do not allow vines to climb the sides of wood houses or fences because they can cause structural damage, which leads to rot.)

SHE NEVER FAILS TO SURPRISE ME . .

She never fails to surprise and delight me - my garden that is. Stuff happens in this semi-tamed wilderness – some of it useful, some of it not; but always delightful.

The onions are blooming and most seem normal, all but one. Bunching onions are supposed to reproduce both by seed and by bulbing from the base of the plant. Well, here is one that has set about reproducing by top setting bulbs.


A top setting bunching onion?

It must be those Egyptians that moved into the neighborhood - hard to trust a walking onion; you just never know where they will show up next. The Egyptian Walking onions are of course top setters that have flowers, but not seeds and produce edible bulblets where the seeds would be. Seems they crossed over with this bunching onion, which is now producing bulbs instead of seeds on some of its flower heads.

So, my next question is, will these bulblets produce new plants and what will happen when those plants reproduce? Gardening the bazaar, at its best - to be continued.


Jungle Chard

We had dinner the other evening at my sister-in-laws, who is also a kitchen gardener, and her Swiss chard is blooming normally. It's about two feet tall and producing a little pollen. Why does my swiss chard look like a jungle – seven feet tall and impenetrable? When I shake it, a fallout of pollen spreads over the garden like dust. I can still identify the ancestral trilogy of this wildness. Perpetual Spinach Chard, Rhubarb Chard and Italian White Ribbed Chard still display their distinct characteristics, but there's been a lot of pollen swapping going on.

I planted broccoli this spring, for the aphids – but did not expect to eat it. It has been so warm so early this year that I only set out a couple of broccoli plants to provide blossoms for the other creatures at the right time. But, we ate some last night and it's still better than store bought, in spite of temperatures in the 80's. Now I wish I had planted more, but with some luck and careful management, these plants may set out to blooming again in the fall and again next spring. Semi-perpetual broccoli, you ask. It appears possible, but I cannot give you the formula yet. Last summer, after the broccoli was ravaged by the other creatures, I cut the plants off a few inches above ground and left the roots to decay in the ground – never expecting to see them green again. In early fall, one plant put up green shoots with multiple heads and delicious broccoli well into winter. It went through another bloom cycle and died.


Spring Broccoli and Fava Beans

For 50 years, I have grown broccoli from seed, eaten it until the sprouts are too small or too spicy and then removed it, making room for the next crop, but from now on, it gets treated differently! Now, I need to figure out a rotation through the broccoli bed to produce the best second growth broccoli – alas, another season, another surprise, another delight.

Truly, she never fails to surprise and delight me.

till next month,

Darrol Shillingburg

Doña Ana County Extension Master Gardener

Ann Palormo's Master Gardener Profile

Joann Embury

Joann Embury and her husband returned to Las Cruces after a period of extensive travel in their sailboat. They are currently involved in remodeling an older home and yard in the Lions Club area of the city. One project includes replacing the yard's Bermuda grass with native and xeric plants.

Joann enrolled in the Master Gardener program for several reasons. "Although I come from a farming family, I have always felt like I was missing the 'green thumb' gene," she says.

She also felt a need to reconnect with the land after spending many years living on their sailboat. She and her husband's travels were a once in a lifetime experience. They sailed from Maine down the Atlantic coast to the Bahamas, Cuba. Windward and Leeward islands en-route to South America. They visited a number of other islands, Panama, Central America and Mexico.

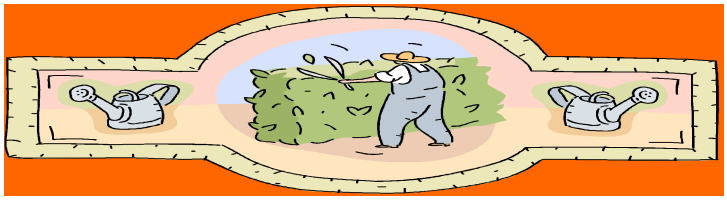
They also explored the Hudson River, Erie Canal, Great Lakes, Kentucky Lake and the Gulf Intercoastal Waterway. "We saw bald and golden eagles, heard coyotes and saw deer swimming in the river in front of us," Joann says.

In Venezuela they adopted their cat Cruz who now weighs 18 pounds. His parents were feral and the Emburys think he may have some wild ancestry in his blood line.

Joann gardened in Dona Ana county for 12 years when they lived here earlier and she also gardened in Maine for four years. Now retired, she has been, among other things, a paramedic and worked in sales. They ran an ambulance service in the county several years ago.

She likes to grow perennials. They found *ruellia* growing in the yard of their home. It self seeds and blooms until the frost. "Like anyone, I like plants that do well," Joan says. "We planted some evergreens to give us color in the winter."

One of her favorite aspects of the Master Gardener program was learning how to propagate plants. She hopes to perfect that skill as they move forward with their new yard and garden.



A Bold Notice...

From: Barbara Arispe

This is a bold notice to those interns who have not fulfilled or have not even begun to fulfill your internship hours as you agreed to do after taking the Master Gardener course. We will be forced to drop you from the newsletter list, and you will be added to a "hit list" instead. Please call in to the Extension Office regarding your intentions by June 10. Thank you.

Drip Irrigated Garden Established at NMSU's Los Lunas Agricultural Science Center

LOS LUNAS Which irrigation technique is more efficient for vegetable gardening — furrow or drip? And which will have a better yield and profit margin?

These are the questions being studied at New Mexico State University' Agricultural Science Center in Los Lunas this summer, under the direction of Ron Walser, urban small farm specialist.

"We are planting two gardens, each a third of an acre, with identical rows of vegetables. The only difference will be how we water the palnts,' he said Thursday, April 19, as Valencia County Master Gardeners and interested residents helped install the irrigation tapes in the field. "we will meter the water use in each garden, record the labor required by each system and ultimately determine the difference in yield."

Walser said the project will include selling the produce at farmers' markets to determine the profitability of the two systems.

Before planting the fields were prepared for traditional furrow irrigation, and for drip irrigation, which involved placing irrigation tape the length of the row in three configurations.

"For some of the vegetable plants the irrigation tape is uncovered, but for the other plants it is covered with either black or silver plastic," Walser said. "The plastic is mainly for weed control, but also helps keep the produce, such as strawberries, off of the ground. But it also helps prevent evaporation of the water from the soil."

Walser and the research farm staff demonstrated how the irrigation tape and plastic are mechanically installed behind a tractor. A combination of plow discs and sheets placed the irrigation tape under the plastic and tilled dirt along the edge to hld the plastic down.

"When we plant, we will cut holes in the plastic at one-foot intervals where the emitter holes are in the tape," Walser said. "We will be planting a wide array of vegetables and several varieties of each one."

Many of the vegetable plants have been started in the greenhouse but some, such as green beans, peas, radishes, carrots and spinach, will be from seeds planted directly in the row. The list of produce includes cantaloupe, green chile, jalapeno peppers, bell peppers, tomatoes, cucumbers, artichoke, Swiss chard, beets, lettuce, squash, okra and cole crops such as cabbage that enjoy the cool season and are somewhat cold tolerant. Included in the planting will be a variety of herbs and cut flowers.

The cost for the irrigation system, which Walser says will serve two growing seasons, is approximately $120 for 5,000 feet of the irrigation tape and $100 for a 3,000-foot roll of plastic. In addition, a PVC pipe system was installed at the head of each row to bring the water to the field. This system includes filters, volume meter, fertilizer injection system and pressure control that will maintain the water at 10 pounds of pressure.

"Water pressure any higher than 15 pounds will cause the irrigation tapes to balloon up and split open," Walser said.

The field test is among the various projects Walser is starting at the Los Lunas research farm to introduce new farming techniques for small acreage in the Middle Rio Grande Valley. In addition, an orchard with nearly 100 varieties of fruits has been planted.

"By our field day on August 15, we should have a fully producing commercial garden," Walser said. "The orchard will not be producing fruit until next year."

The research project is part of NMSU's continuing outreach efforts to help educate and improve the lives of people in New Mexico.

From the Desk of . . . .

Greetings to the Master Gardeners! I may have to reintroduce myself to you as I will be missing several of the next monthly meetings. I would like to thank Terri Gutierrez for helping to fill in for me. She is very capable of running the meeting. I have been providing topics for the agenda, so don't shoot the messenger!!!

I have returned from the National Master Gardener Conference in Little Rock, Arkansas. This was a very large conference with over 1200 Master Gardener's from all over the Untied States and Canada. I was the only person from New Mexico! It was a beautiful time to be in Arkansas as the weather was great and the gardens were beautiful. TV Garden Host P. Allen Smith was one of the conference speakers. He lives in Little Rock and we got to view his personal and TV Set garden. A national MG logo and slogan was reveled at the conference. ***Plants, People, and Partnerships*** is the slogan.

I hope some people are planning to make the NM Master Gardener Conference in Belen, NM. It would be nice to have a good showing from the southern part of the state. I think it will be a good conference with some interesting trips. We can show the rest of the state what our group can do. Please make plans to attend. Remember, these hours count toward your recertification. We still have registration forms that can be faxed in for you.

The summer months mean plant problems as people are having a hard time adjusting to the higher summer temperatures. Many of the plant problems will be water stress related. Make sure when talking to people that you remind them to water deeply, wider than the plant canopy, and at least twice per week during the heat. Most plants need about 1 ½ to 2 inches of water per week. Also remind them to periodically check their sprinkler systems for wear, misalignment, broken valves, clogged heads, pressure changes, and adjustments for weather.

Terri will be doing the May meeting for me as I will be at a Texas/NM Water Conference in South Texas. See you soon!

Horticulturally Yours,

John M. White

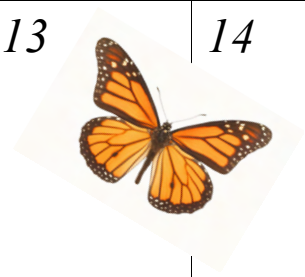
John M. White

Dona Ana County Extension Director and

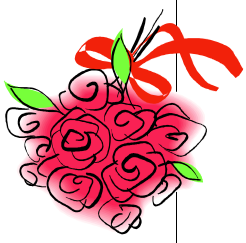
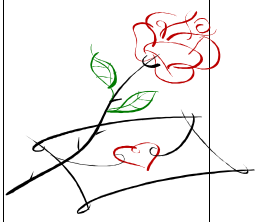
Agriculture Agent – Horticulture, Agronomy, 4-H and Adult

If you are an individual with a disability who is in need of an auxiliary aid or service to participate in an Extension activity, please contact John M. White at 505-6649 at least two weeks prior to the event.

May 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 MG Telephone Hotline 9 am to 1 pm Extension Office Bonnie Eisenberg Mary Thompson Tom Packard	2	3 CDNP Desert Expo 7:30 am to 2 pm LC Downtown Mall John M. White	4 MG Telephone Hotline 9 am to 1 pm Extension Office Alberta Morgan Frank Conner Dixie LaRock	5 Las Cruces Garden Tour Elks Club Area Of Las Cruces All Day Collette Bullock John M. White
6	7	8 MG Telephone Hotline 9 am to 1 pm Extension Office Dixie LaRock Joan Lane	9	10	11 MG Telephone Hotline 9 am to 1 pm Extension Office Ann Shine-Ring Kathi Barit Anita Morales	12
13 	14	15 MG Telephone Hotline 9 am to 1 pm Extension Office Dee Davis Ann Palormo Margaret Shutt	16 MG Newsletter Meeting 8 am to 9 am MONTHLY MEETING 9 AM TO 11 AM John M. White	17	18 MG Telephone Hotline 9 am to 1 pm Extension Office Franklin and Desiree Simon Nancy Taylor	19
20	21	22 MG Telephone Hotline 9 am to 1 pm Extension Office Kathi Barit Peg Hoffman John Hyndman	23 NMSU Onion Field Day 8 am to 2 pm Fabian Garcia Plant Science Center Jeanine Castillo John M. White	24	25 MG Telephone Hotline 9 am to 1 pm Extension Office Judy Picker Craig Severy Anita Morales	26
27	28	29 MG Telephone Hotline 9 am to 1 pm Extension Office Mary Thompson Carla Clouser Maureen Pollack	30	31		

June 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					*1* MG Telephone Hotline 9 am to 1 pm Extension Office Alberta Morgan Mary Thompson Mary Vee Cammack	*2* County 4-H Horticulture Contest Hatch High School John M. White Juliet Williams LC Home Builder's Show 8 am to 8 pm
3 Las Cruces Home Builder's Show 8 am to 6 pm	*4*	*5* MG Telephone Hotline 9 am to 1 pm Extension Office Anita Morales Margaret Shutt	*6*	*7* New Mexico Annual MG Conference Valencia County Belen, NM John M. White Continues thru June 9	*8* MG Telephone Hotline 9 am to 1 pm Extension Office Ann Shine-Ring Mary Vee Cammack Nancy Taylor NM MG Conference	*9* New Mexico Annual MG Conference Valencia County Belen, NM John M. White
10 	*11*	*12* MG Telephone Hotline 9 am to 1 pm Extension Office Dee Davis Sarah Wood Margaret Shutt	*13*	*14*	*15* MG Telephone Hotline 9 am to 1 pm Extension Office Ann Palormo Maureen Pollack	*16*
17	*18*	*19* MG Telephone Hotline 9 am to 1 pm Extension Office John Hyndman Marti Taylor	**20** Newsletter—8 am MONTHLY MEETING 9 AM TO 11 AM Extension Office John M. White Dist 4-H Contest Sierra County T or C, NM Juliet Williams	*21*	*22* MG Telephone Hotline 9 am to 1 pm Extension Office Bonnie Eisenberg Nancy Taylor John Hyndman	*23*
24	*25*	*26* MG Telephone Hotline 9 am to 1 pm Extension Office Jane Elliott Mary Thompson Dana Baker	*27*	*28*	*29* MG Telephone Hotline 9 am to 1 pm Extension Office Ann Palormo Judy Picker Sarah Wood	*30*