



Master Gardener Newsletter

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

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OF WATERMELON AND WAISTLINES: NEW LOW-SUGAR VARIETIES FROM ARS

Just in time for bathing suit season, a leaner, meaner watermelon that boasts all the refreshing flavor and good-for-you nutrients of many conventional varieties, but contains more than 50 percent less sugar.

Agricultural Research Service (ARS) plant geneticist Angela Davis in Lane, Oklahoma is the chief breeder of two low-sugar melons that should be a welcome treat for dieters, diabetics and everyone else wishing to curb their sugar or carb intakes.

Davis, who works for at the ARS South Central Agricultural Research Laboratory in Lane, is currently sharing the new watermelon stock with interested growers. And while their official debut will depend upon farmer's receptiveness, the seeded watermelons could start showing up in produce aisles by summers end.

Davis embarked on the quest for a naturally low-sugar watermelon after realizing the fruit was off limits for many consumers, including the nation's more than 20 million diabetics.

But don't blame the melon for its current sugary taste. Over the decades, breeders have increasingly selected for sweeter and sweeter fruit. In fact, heirloom watermelons that might have rolled out of their Granddad's garden contained about 25 percent less sugar than their contemporary cousins.

Davis wasn't sure if she'd be able to achieve a low-sugar, red-fleshed melon, given the tendency of richly pigmented watermelons to contain higher levels of sugar. But after screening hundreds of watermelons, she discov-

ered one with golden flesh and low sugar. It provides the genetic foundation for the current lines, which are red.

Like all watermelons, the new cultivars are an excellent source of lycopene, a powerful antioxidant associated with a lower incidence of some cancer. They're also rich in vitamin A and potassium.

And for those who might miss the sweetness of this summertime favorite but don't want to sacrifice calories, a little artificial sweetener can be sprinkled onto the fruit to give it a flavor that's comparable to conventional watermelons.

Davis also developed a melon that's middle-of-the-road in terms of sugar content, satisfying customers who still desire a touch of natural sweetness.

**MG MEETING
ON
AUGUST 15, 2007**

NEW SOUTHERN PEAS DEVELOPED BY ARS, COOPERATORS

Two new varieties of southern peas — WhipperSnapper and GreenPack-DG—boast attractive colors, pleasing textures and flavors, plus nutrients like protein and folate, a B vitamin. Agricultural Research Service (ARS) research leader Richard I. Fery co-developed these superior southern peas.

Fery described the research that led to the rich green color of GreenPack-DG in the June issue of *HortScience*. WhipperSnapper will be featured in an article in the same journal later this year, according to Fery. He's based at ARS' U.S. Vegetable Laboratory in Charleston, S.C. where he also develops new and improved bell and habanero peppers.



Both southern peas were offered to seed producers and researchers for the first time in 2006, after years of

laboratory, greenhouse and field tests, Fery noted.

Southern peas technically are beans, not peas. They are sometimes called cowpeas, black-eyed peas, field peas or crowders. Southern peas appear in traditional southern cuisine in soups, salads, casseroles and fritters, a fried quick-bread.

GreenPack-DG forms long, slightly curved pods that hold 12 plump, olive-green peas, each with a pink eye. It is the only pink-eyed southern pea that has two genes for greenness, not just one. Its "DG" initials stand for "double green."

The double-green feature is the work of genes called green cotyledon and green testa. The genes ensure that the peas won't lose some of their green color while growers are waiting for the pods to become dry enough to machine-harvest and to shell the peas from the pods.

Double-greenness gives GreenPack-DG a significant advantage over Charleston Greenpack, an earlier southern pea from Fery's laboratory that has only one greenness gene. In fact, Fery expects GreenPack-DG to replace the earlier southern pea as a favorite for processing into frozen pea products.

Greenpack-DG resulted from cooperative research conducted by ARS and Western Seed Multiplication, Inc., Wadmalaw Island, S.C.

WhipperSnapper yields pods packed with 14 creamy-white, kidney-shaped peas. It can be picked when the pods are still immature, tender and edible, then sold as fresh snaps. The pods also can be left on the vine until ready to sell with full-sized peas either within the pods, or shelled.

This southern pea flourishes in weather that's too hot for some other beans. Also, it is extremely easy to shell, a feature that should make it especially popular with home gardeners, who typically shell by hand. Larger scale growers will find the southern pea suitable for mechanical harvesting.

Fery developed WhipperSnapper with colleagues from Louisiana State University-Baton Rouge and Lincoln University, Jefferson City, Mo.

PLUM-POX RESISTANT TREES MOVE FORWARD

Plum trees with resistance to plum pox (PPV), a virus that can devastate stone fruit, have moved a step closer to reality, according to the Agricultural Research Service (ARS), which is leading the project.

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), which has regulatory authority over genetically engineered organisms, recently "deregulated" HoneySweet, as the PPV-resistant plum tree named. This means APHIS had determined that the tree is not a plant pest and that it will have no significant impact on other plants.

Deregulated products have a history of safe use in U.S. agriculture. APHIS has overseen the deregulation of more than 70 genetically engineered plants, including corn, cotton, rapeseed (canola), soybean, flax, sugar beet and squash. In September 1996, papaya became the first genetically engineered tree to be deregulated.

ARS is now taking the next step for HoneySweet's development, which is for cooperators such as universities to plant small quantities of the trees to study how they grow under a variety of conditions, a process commonly undertaken for new varieties.

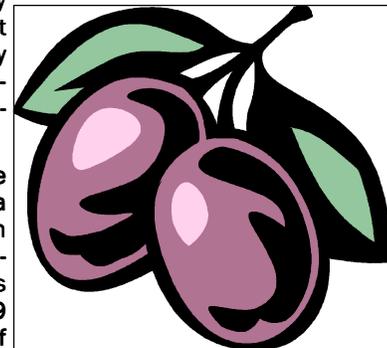
A standard genetic engineering technique was used to introduce a gene for the PPV coat protein into cells extracted from plum seeds. Cells that incorporate the new gene into the plum DNA were then regenerated and grown into complete plum trees. These trees have the new gene in their DNA and are resistant to PPV through a process called gene silencing.

While HoneySweet itself produces high-quality commercial standard, it may also be used as breeding stock to introduce PPV resistance into other plum breeding lines for future variety development. Fruit from HoneySweet or its progeny will not be eaten or sold without further regulatory approval by the U.S. Food and Drug Administration and the U.S. Environmental Protection Agency.

PPV was first identified in the United States in Pennsylvania in 1999 and has since been found in New York and Michigan. To ensure that PPV was eradicated during the 1999 outbreak, over 1,600 acres of commercial orchards and homeowner trees had to be destroyed at a cost of more than \$40 million.

But since developing a PPV-resistant plum tree is not a simple or quick process, ARS has not waited until plum pox has a major presence in the United States to do the research. Rather, ARS has taken the proactive step of developing a PPV-resistant tree and doing the testing required to allow genetically engineered trees to become available before plum pox precipitates a crisis in this country.

More information about the HoneySweet plum tree can be found at www.ars.usda.gov/is/br/plum_pox.





August 9
Lynette Fannon-Lamkin

August 12
Marti Taylor

August 14
Virginia Podmenik

August 21
Edna Lucero

Happy Birthday!!!

- Q.** I am growing a small crop of watermelons and don't want any wasted by harvesting them too early. Can I tell when they are ripe by knocking on them?
- A.** Only if you have a very good ear. A dull hollow sound means dense flesh and helps indicate ripeness. But a ringing hollow sound means "not ripe yet"; and unless you spend a lot of time listening to melons, the difference may not be obvious. For better results, check the following: 1. The vine tendrils should be dead or nearly so, brown and dry. 2. The spot where the melon lays on the ground should be yellow not white. 3. The skin should be dull, not shiny, and it should be tough.

August Garden Tips By Ann Fair

August is a little bit like January.....not too much to do but deadhead, pinch and cut annuals and perennials.....and enjoy a beautiful yard!!!!!!.....and eat tomatoes!!!!!!!

Pinch back spindly annuals and fertilize for another spurt of growth. Annuals tend to have a pause in growth in August. To pep them up, cut the stems back by at least half, use an organic fertilizer in the soil around them and soak the plant and soil thoroughly. You can also fertilize with a 5-10-5 fertilizer, or a water soluble fertilizer. Divide bearded Iris bulbs in early August. Select and cut flowers, grasses and leaves that you want to dry for display in arrangements.

I just went out to check the bearded Iris bulbs as it's time to divide them in early August only to find that lantana had taken over the bearded Iris bed.....doesn't that frost you!!!!!!

It does me!!!!!!

Select and cut flowers, grasses and leaves that you want to dry for display in arrangements.

TREES AND SHRUBS.....Remove evergreen branches that are dead or diseased. Do not fertilize trees and shrubs until next spring.....Make sure trees and shrubs get enough water during August.

ROSES: Last month to fertilize rose bushes. Do not fertilize after the middle of the month. Stop deadheading roses so they can begin to harden off and form rose hips.

LAWN:.....For lower elevations, this is the last month you can install warm season grasses. Mow lawn to no less than 2 1/2 and never cut any more than 1/3 of the growth.

Pay particular attention to good watering practices this month. Stressed areas in the full sun, or on the southern or western slopes may need extra watering. Regular watering. All areas, third feeding of pre-emergent fertilizer. Look for grub activity.

KITCHEN GARDEN: Continue harvesting tomatoes, warm season vegetables and herb.

Here are some ideas on some of the

herbs that you grow....

1. Basil tastes good in tomatoes, herb oil and vinaigrettes.
2. Italian dishes
3. Egg and cheese dishes
4. With rosemary in bread
5. Chives can be used with sour cream for a dip
6. In egg dishes, potato dishes in vegetable seasonings and in Mexican dishes.
7. Dill is great in salads, dips, and dressings.
8. Dill is good with fish, on tomatoes, in egg dishes and in Chicken dishes.
9. Mint is good in tea, lemonade, and other fresh drinks.
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Also, mint juleps!!!!!!

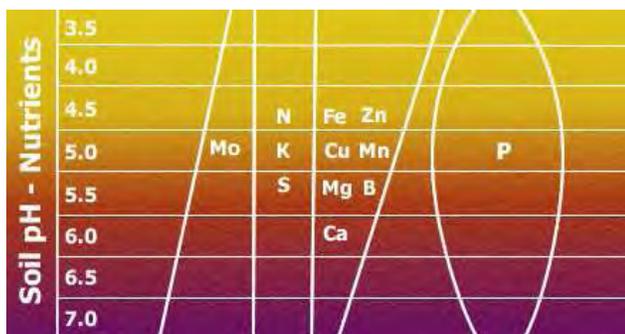
11. Oregano is good in stews, soups and Italian dishes.
12. Oregano is good in stews, soups, and Italian dishes.
13. Parsley is a good garnish, but it can also be used in almost any main course, salad or soup dish. It's also good in egg and cheese dishes.
14. Rosemary can be used in breads, chicken dishes, pork dishes and in vinaigrettes.
15. Sage can be used in Italian dishes, turkey stuffing, and vegetable seasonings.
16. Thyme is good in turkey stuffing, on vegetables and tomatoes and in stews.

Harvest garlic in lower elevations.....



Getting to the Roots of Productivity

We all learned something about soil chemistry early in our Master Gardener training. I recall becoming resolved to the inevitable challenges of gardening in alkaline soil after seeing this chart showing the effects of soil pH on mineral availability.

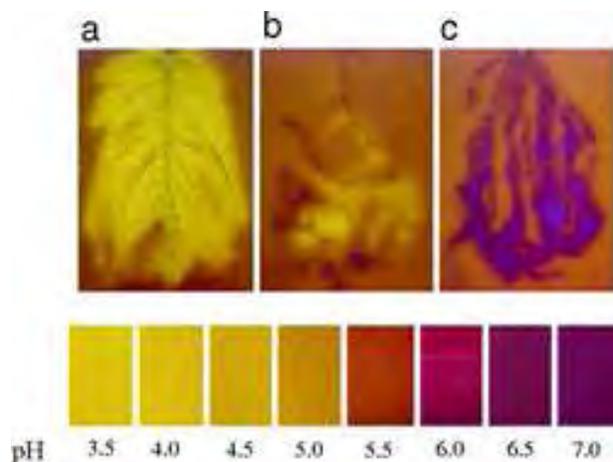


However, after reading the agricultural research recently published by Chinese researchers (1) about the acidifying effects of faba bean root exudates in the soil and the effect that has on the mineral uptake of other plants, I have new hope of achieving a more favorable level of pH in the root zone.

Here is the core of what they discovered from the four-year research project.

Inter-planting corn with faba beans (small seeded varieties of fava beans) increased the yield of corn by 49% and of faba beans by 26% in phosphorus-deficient soils, when adequate nitrogen was available.

Although there are non-chemical factors that effect the success of inter-species plantings, such as moderating soil temperatures, improving moisture retention, increased soil aeration, aerial support and shading, the increased yield in this combination resulted from the chelation of Ca, Fe and Al thereby increasing the availability of otherwise insoluble Phosphorus.



The chart above shows the change in pH caused by root exudates. (a) is the rhizosphere surrounding faba bean roots, (b) is that surrounding soy bean roots and (c) shows the alkaline exudates from corn roots. Clearly, faba beans create an acidification of the rhizosphere that has a beneficial impact on corn when their roots systems share the same soil space.

So what does this mean to gardeners in alkaline desert soils? An obvious answer is to interplant faba or fava beans with corn and take advantage of the rhizosphere acidification and increased availability of Phosphorus. I have planted Sweet Loraine and Guatemalan Purple faba beans here for the last three years and find them well suited during all months of the year, except June and July. They are cold hardy enough to grow through winter without row covers - at least most winters. They make an edible cover crop through winter, if you enjoy the delicious greens, raw, steamed or wilted. Fortunately, they are also one of the most efficient nitrogen fixers.

Other uses of this knowledge in the garden require more personal inquiry and experimentation. I am experimenting with inter-planting tomatoes and cowpeas to see if that combination makes additional calcium available to the tomatoes. Since the acidification from exudates causes chelation of calcium and iron, it may have some impact on iron chlorosis that is common here.

I would encourage you all to read the original research report, expand on your understanding of soil chemistry and biology and experiment with new inter-planting combinations in your own gardens.

till next time,
 Darrol Shillingburg -
 Doña Ana Extension Master Gardener

(1) Diversity enhances agricultural productivity via rhizosphere phosphorus facilitation on phosphorus-deficient soils
 Long Li[†], Shu-Min Li[‡], Jian-Hao Sun[§], Li-Li Zhou^{*}, Xing-Guo Bao[§], Hong-Gang Zhang^{*}, and Fu-Suo Zhang[†]
^{*}Key Laboratory of Plant and Soil Interactions, Ministry of Education, College of Resources and Environmental Sciences, China Agricultural University, Beijing 100094, China; [§]Institute of Soils and Fertilizers, Gansu Academy of Agricultural Sciences, Lanzhou 730070, China; and [†]Resource and Environmental College, Northeast Agricultural University, Harbin 150030, China
 (Available on line at) <http://www.pnas.org/cgi/content/>

REQUEST FROM CURTIS SMITH

Dear Master Gardeners,

I am asking your help in compiling a list of ornamental plants (native or exotic) grown in New Mexico. You grow many of these and as Master Gardeners you may see many others. If you would like to participate in development of a list of all plants grown as ornamentals in New Mexico, I have a form detailing the information I would like with the plant list.

Some of you may be working with Garden Clubs or Native Plant Societies that are also developing plant lists. If the organization making the list allows you to send their list, I would like to have it also.

Ornamental Plants Grown in New Mexico

Plant common name

Plant scientific name (including variety and cultivar) if known Digital photos if possible (plant showing site from several angles and its growing site as well as close-ups of the plant showing flowers, fruit, leaves, stems, etc.)

Plant condition (health status and vigor, size, other information you want to include - eg. would you or do you grow it?)

Plant problems

Irrigation

never

roof runoff only

roof runoff supplements irrigation (check items below and this)

irrigation once a month

irrigation twice a month

irrigation twice a week

irrigation once a week

irrigation more than once a week

other (describe)

soil type (texture and amendments) if possible

plant location (city address, general rural directions to farm or ranch)

Name of owner - if owner (with the owners permission)

Name of Master Gardener submitting report

Address, e-mail, county MG program (even if plants reported from a different county)

You can submit reports of plants you encounter in parts of the state other than you residence if you desire, but give the separate location information for the plant and your address

WORKING' THE PROGRAM

By Dee Davis

When a few neighbors knew I'd received a "Certificate of Completion" for having taken the Master Gardening class, they began asking questions. I made it clear that I couldn't call myself a *bona fide Master Gardener* just because I'd passed an exam and had a big, fat reference book. In my heart I knew that becoming a Master Gardener would be a continuing learning process and having the humility to say, "I don't know, but I'll get back to you." Just as lifelong learning is precisely that - lifelong - I believe that becoming a Master Gardener has the same thrust. In fact, I may never achieve this high goal.

The first person to put me to the test was my neighbor, John, who asked, "How come my Flowering Purple Plum looks puny in comparison to yours? After all, the builder landscaped your place and mine at the same time." One look told me that the drip irrigation around his tree had to be moved away from the trunk to the edge of the drip line. That one was easy, but there have been other more challenging inquiries.

In a way, being a gardening resource for my neighbors was, and still is, like working the telephone hotline. I get ongoing practice to approach a situation that needs a resolution. And similar to the hotline, answers don't always come easy. Many have to be researched. Initially, my expectation was high. After all, I'd taken the course. Weren't answers supposed to just fly out of my mouth? I soon took a realistic approach, recognizing I didn't have to be an exceptional Master-Gardener-in-process, *just an average one*. Now I'm willing to jump into the middle of a very deep pool and just float for a while, which I'm doing right now with another neighbor who wants help. She wishes to have vegetation in her front yard that will sustain a daily blast of afternoon sun from the west, as well as high winds that recently ripped out the Lantana, sedum, and other things she'd previously planted. (I'm still working on this one.)

One of the most satisfying aspects about having had Master Gardener training is knowing that the smallest guidance I share gives my neighbors added joy in gardening.

Master Gardener Profile: Maureen Pollack

By Ann Palormo

Master Gardener Maureen Pollack has lived in Las Cruces for the better part of 20 years. However, she only became serious about gardening a few years ago when she knew she was not going to sell the house she lives in and move any time soon.

Maureen was a real estate broker in Las Cruces for several years. At that time she encouraged her mother to purchase a small house about 8 blocks from the university. It was a single family home in immaculate condition with a ¼ acre lawn in the back. When she and her daughter moved back to Las Cruces, she bought the house sight unseen and gave notice to the ten-year tenant.

Sadly what she found when she took possession was not the immaculate house she had sold her mother. The tenant's dogs had destroyed the lawn and the sprinkler system and dug large holes under the house. On the positive side, they had a 'blank slate' on which to develop a garden.

She had always puttered in gardening in whatever space she had. It was the birth of her daughter Sophie in 1997 that gave her the opportunity to be at home and actively garden. Fortunately, Sophie's favorite place to be was in the dirt.

Maureen grew up in southern California not far from the ocean. With the help of a twice-weekly gardener, the grounds of her family's home were well manicured. She came to Las Cruces in 1986 and began working in real estate and new construction. At that time her gardening was limited to landscaping front yards of properties for re-sale.

Now gardening in her own space for her own pleasure, Maureen likes to grow things that do not exactly thrive in our desert climate. She loves the fragrant flowers and plants that she grew up with in southern California so gardenias and dwarf citrus live in pots at her home. She tries to grow sweet peas every year but with only limited success. Lavender is finally working.

She now has a vegetable garden for summer favorites – basil, tomatoes, eggplant, peppers and melons. "I love the idea you can grow the food you eat and am very interested in sustainable agriculture," Maureen says.

The satisfaction she derives from being outside surrounded by nature led her to sign up for the Master Gardener program. She believed that this educational experience would enhance the satisfaction she gets from growing things from seeds. One of the things she learned is how much there is still to learn. She finds the Master Gardeners are immensely helpful in sharing their knowledge and gardening tips.

Maureen says retirement is a word her family never used. After she left the real estate business, she put her law degree to work teaching business law at NMSU. Gardening and her 10 year-old-daughter take most of her time. She enjoys traveling with Sophie and seeing things again through her eyes or discovering new places together.

Home includes her 14 year old cat Oats and two shelter dogs Mollie and Nate. One sister lives in Las Cruces, a brother in Silver City. Her other three siblings live in California. She feels blessed to have a close family and many good friends here and around the country.

Editor's note: Maureen and Sophie are now living in Tucson where Sophie attends the Montessori school. Since they will return to Las Cruces frequently, Maureen hopes to stay involved with the Master Gardeners here.

From the Desk of

The summer monsoon season has hit this month, or at least in my section of town. The additional moisture sure has helped plants to grow and prosper in the local area. This just goes to show what effects the heat and drought have on plants. Imagine what it would be like if we had just another couple of inches of precipitation to our eight inches of annual precipitation!

Thanks for all the help you Master Gardeners have been putting in these past couple of months. Some have put in more hours than others, but at least some are trying. The end of year totals on volunteer time will be due to Barbara soon, so if you plan on graduating this year you better get caught up on your hours. Check with Barbara or George for your totals. We still have some volunteer opportunities to get your time in.

The 2008 Dona Ana County Master Gardener Program is about to start in September. We are busy trying to get people recruited for the program. If you know of any neighbors, friends, or relatives that would be interested, be sure to have them contact the county extension office. We do have some brochures about the program if you need them at an office, church, activity center, or business location.

Larry Dickson is working on the SNMSF Produce Department and Kathi Barit is working on the booth exhibit for the SNMSF. Please contact either one of them, if you would like to volunteer to help. The SNMSF is Oct 2-7, 2007.

The NM Farm & Ranch Museum is asking us to have a booth at their Harvest Festival Sunday, September 9, 2007. Don't forget the MG Plant Sale on September 15, 2007 at the LC Downtown Farmer's Market.

Next meeting will be August 15, 2007. See you then!!

Horticulturally Yours,

John M. White

John M. White

Dona Ana County Extension Director and

Agriculture Agent - Horticulture, Agronomy, 4-H & 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.

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August 2007



Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3 MG Telephone Hotline 9 am to 1 pm Extension Office Mary Thompson Craig Severy Alberta Morgan	4
5	6	7 MG Telephone Hotline 9 am to 1 pm Extension Office Margaret Shutt John Hyndman Craig Severy	8	9	10 MG Telephone Hotline 9 am to 1 pm Extension Office Ann Shine-Ring Nancy Taylor Sharon Poindexter	11
12	13	14 MG Telephone Hotline 9 am to 1 pm Extension Office MaryVee Cammack Mary Thompson	15 MG Newsletter Meeting 8 am to 9 am MONTHLY MEETING 9 AM TO 11 AM Extension Office John M. White	16	17 MG Telephone Hotline 9 am to 1 pm Extension Office Bonnie Eisenberg Sarah Wood	18
19	20		22	23	24 MG Telephone Hotline 9 am to 1 pm Extension Office Yvonne Kim Craig Severy	25
26	27	28 MG Telephone Hotline 9 am to 1 pm Extension Office Joan Lane Margaret Shutt	29		30	31 MG Telephone Hotline 9 am to 1 pm Extension Office Ann Palormo



September 2007



Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4 MG Telephone Hotline 9 am to 1 pm Extension Office Marti Taylor Mary Thompson	5	6 2008 MG Program Training 8:30 am to 3:30 pm Extension Office John M. White	7 MG Telephone Hotline 9 am to 1 pm Extension Office Alberta Morgan Dee McNutt	8
9	10	11 MG Telephone Hotline 9 am to 1 pm Extension Office Pat Sanders Sarah Wood Barb Sallach	12	13 2008 MG Program Training 8:30 am to 3:30 pm Extension Office John M. White	14 MG Telephone Hotline 9 am to 1 pm Extension Office Ann Shine-Ring Dee McNutt Nancy Taylor	15
16	17	18 MG Telephone Hotline 9 am to 1 pm Extension Office Bonnie Eisenberg Dana Baker	19 MG Newsletter Meeting 8 am to 9 am MONTHLY MEETING 9 am to 11 am John M. White	20 2008 MG Program Training 8:30 am to 3:30 pm Extension Office John M. White	21 MG Telephone Hotline 9 am to 1 pm Extension Office Sarah Wood	22
23 	24	25 MG Telephone Hotline 9 am to 1 pm Extension Office Sharon Poindexter Dee McNutt Pat Sanders	26	27 2008 MG Program Training 8:30 am to 3:30 pm Extension Office John M. White	28 MG Telephone Hotline 9 am to 1 pm Extension Office Open/Vacant	29
30						