Dave’s Ramble

Undoubtedly, there are some things about farming that just leave one seemingly unable to conjure a fair explanation. As the sun rises, the farmer brushes away the ice from under his nose and tries to shake off the January chill while filling the silage wagon from the trench located a mile and a half on the backside of the farm. He mutters to himself “Huh! They expect me to believe that the sun is closer to the earth in the winter here in the northern hemisphere. I sure am looking forward to global warming.” Then the farmer really ponders all of the scientific and technological advances that he has witnessed; yet, the inability for scientists to answer the day to day “How Comes” he encounters:

How come cows are careful to never step in a hole and break a leg but manage to step on your big toe at will?
How come wasps always build their nest in the pipe end closest to the chain clasp?
How come bulls are tame until they have you alone in the middle of pasture?
How come you either have seed corn maggots or you don’t?
How come the five day weather forecast is crystal clear until you put the haybine in the field?
How come every time you are making a respectable income from a crop, a new disease or insect pest always finds its way to the farm?

I trust that you have also pondered and conjured your fair share of “How Comes”. If so, then I highly recommend that you immediately exercise your neck back into reality - Put behind at once such childish and futile thoughts - Just feed the cows!

Calendar of Events

Mark Your Calendars --- Plan To Participate

- January 10 – Pesticide Certification Exam - DFRC
- January 20-23 – Horse World Expo – Timonium
- January 28 – Central MD Veg Meeting – Upperco
- February 1-3 – Mid-Atlantic Veg Meeting – Hershey PA
- February 2 – Southern MD Veg Meeting – Clements
- February 5 – CMREC Upper Marlboro Vineyard Pruning
- February 7 – Pasture Workshop - DFRC
- February 14 – Pest Recert. & NM Voucher – DFRC
- February 23 – Bay Area Fruit School – Wye REC
- February 24 – WMREC Regional Fruit Mtg - Keedysville
- March 7, 14, & 21 – Intro to Farming - DFRC

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- Winter Meetings
- SMRFM Hay & Straw
- Tobacco Seed Distribution
- Wye REC Pumpkin Study
- Pest Alerts: Swede Midge & Soybean Rust
- Directory of Maryland Farms Website
- 2004 Soybean and Corn Variety Trials
- Endophyte Benefits to the Tall Fescue Plant
- Forages for Goats
- Goat & Sheep Produ8ction Spreadsheets
- Nutrient Management Update
- RMA Crop Insurance News
- CMREC Upper Marlboro New Blueberry Trial
- CMREC Upper Marlboro Vineyard Update
- Farm Safety Websites
Private Pesticide Applicator & Nutrient Management Voucher Trainings

A Private Pesticide Applicator Recertification & Nutrient Management Voucher Training will be held at the Davidsonville Family Recreation Center (DFRC) from 5:00 p.m. to 9:00 p.m. February 14, 2005. The Pesticide Applicator Recertification portion of the program will be from 5:00 to 7:00 p.m. and the Nutrient Management Voucher Training will be from 7:00 to 9:00 p.m. To register for the training event contact the Anne Arundel County Extension Office at 410 222-6759.

Also Private Pesticide Applicator Recertification & Nutrient Management Voucher Training will be offered as part of the Southern Maryland Vegetable and Fruit Production Meeting on February 2, 2005.

Become a Certified Private Applicator

If you have allowed your pesticide certification to expire or are a new applicant, then you must attend the Private Pesticide Applicator Certification Training and pass the exam. A Private Applicator Certification Training will be conducted at the Davidsonville Family Recreation Center (DFRC) from 7:00 to 9:00 p.m. on January 3, 2005. A Private Pesticide Applicator Exam will be given at the Davidsonville Family and Recreation Center (DFRC) from 7:00 to 9:00 p.m. on January 10, 2005.

Horse World Expo

January 20–23rd, 2005

The Horse World Expo at the Timonium Fair Grounds is scheduled for January 20-23rd, 2005. If you have never attended this event, I guarantee that you will be amazed at the crowd and excitement generated. Join the fun and see why the 1.7 billion dollar a year Maryland horse industry is a shining star agricultural industry for the state.

You are also invited to visit with Extension faculty at the MCE Horse Expo Exhibit Booth, and to attend one or more of the University of Maryland Seminars.

Maryland/Delaware Forage Council Holds Two Winter Pasture & Hay Conferences: The Central Maryland Pasture Conference Westminster, Maryland

January 25, 2005

Hay growers, dairy and livestock producers, horse owners and those who provide support to these industries should plan to attend the Central Maryland Pasture Conference to be held January 25, 2005 in Westminster. This conference will address key issues and concerns facing pasture producers. Both a day and an evening session will be held.

The day session will cover a wider range of topics and is designed largely for full-time dairy and livestock producers as well as hay growers. The evening session covers fewer topics and is designed especially for part-time and small acreage livestock and horse owners who face somewhat different challenges than producers with larger acreages.

The conference will be held at the Carroll County Agricultural Center in Westminster. Registration will begin at 9:30 for the day session and 6:00 for the evening session. Please call the Carroll County Extension office to reserve a seat at 410 386-2760.

Delmarva Hay & Pasture Conference

Harrington, Delaware

January 26-27, 2005

Topics aimed at improving Delmarva’s hay and pasture production will be the focus of the program for the Delmarva Agronomy and Technology Conference. The pasture conference is part of a 2-day program being held at the Delaware State Fairgrounds in Harrington. The program will address key issues and concerns facing hay and pasture producers.

Topics will include designing grazing systems for small acreages, equine health impacts from grazing, managing sacrifice and heavy use areas, weed control in pasture and hay, and preparing for pasture establishment: taking soil samples and selecting species.

The conferences also feature displays and exhibits by numerous agribusinesses. Attendees will be able to obtain information on seed, fertilizer, equipment, fencing, etc. needed for hay and pasture production and management. Register by calling Gordon Johnson, Kent County Extension Office in Delaware at 302 730-4000.

Central Maryland Vegetable Growers Meeting

January 28, 2005

This well sponsored, large grower meeting always offers a great deal of vegetable industry information. The Central Maryland Vegetable Growers Meeting will be held on January 28, 2005, from 8:00 a.m. to 3:30 p.m. at the Friendly Farm Inn, located on Foreston Rd. in Upperco, MD. Pesticide recertification credits are awarded for attending this meeting. For full meeting details, and to register call the Baltimore County Extension Office at 410 666-1024 today.

2005 Mid-Atlantic Fruit & Vegetable Convention in Hershey, PA

February 1-3, 2005

Nearly 2,000 persons, mostly fruit and vegetable growers, from throughout Pennsylvania, Maryland, New Jersey and other states are expected to gather at the Hershey Lodge and Convention Center for the 2005 Mid-Atlantic Fruit and Convention. The event is jointly sponsored by the State Horticultural Association of Pennsylvania, the Pennsylvania Vegetable Growers
Association, the Maryland State Horticultural Society and the New Jersey State Horticultural Society.

The Great American Hall at the Hershey Lodge and Convention Center will host the Trade Show with over 130 exhibitors. Specialized horticultural equipment, farm market merchandise, and packaging, will all be on display along with information on the latest seed varieties, fruit varieties, pesticides and other supplies and services for the commercial grower.

Registration either through the mail or at the door is required to attend both the trade show and educational sessions. For more information on registration, contact: William Troxell, Pennsylvania Vegetable Growers Association - 717-694-3596 or pvga@pvga.org

Southern Maryland Vegetable & Fruit Production Meeting
February 2, 2005

On Wednesday, February 2, 2005, the Southern Maryland Vegetable and Fruit Production Meeting will be held at a new location. This year the meeting will be held at the A-Maze-in Place Hall in Clements, Maryland.

This meeting will provide Private Applicator Recertification & Nutrient Management Voucher Recertification. Speakers will present a broad range of topics including: “Produce Packing and Processing Guidelines”; “Crop Production Profiles – Cultural & Chemical Insect Practices for Major Vegetable Crops”; “New Fungicides - What do they Work Against”; “New Insecticides - Where and How they Work”; “No-Till/Strip Till Vegetables”; “Vegetable Weed Control”; “Cool Season Crops for Profit; Nutrients and the Soil”; and “The MCE/ Maryland Department of Agriculture Pesticide Update.”

Also meeting sponsors will showcase their products and services, and state vegetable organization leaders will be present to recruit and answer your questions. Please attend and make this meeting the best ever. For full conference details, contact Ben Beale, Extension Agent, St. Mary’s County Extension Office at 410 222-6759.

Pasture Workshop
February 7th, 2005

Make plans to attend the Pasture Workshop, Monday, February 7, 2005 at the Davidsonville Family Recreation Center (DFRC) from 4:00 p.m. - 8:00 p.m. This pasture workshop will explore advanced concepts of pasture production in the Southern Maryland region from establishment of forages to animal utilization. Topics will include: Forage selection; soil limitations; pasture establishment & maintenance; soil fertility; integrated crop management; weed control; grazing and pasture based rations. An NRCS/SCD program update for pasture operations will also be provided. To register for this event contact the Anne Arundel County Extension Office at 410 222-6759.

Upper Marlboro Research Vineyard Pruning Clinic
February 5, 2005

The University of Maryland Vineyard Team and the Maryland Grape Growers Association wish to invite you to attend the MGGA Upper Marlboro Research Vineyard Pruning Clinic to be held on February 5, 2005 from 9:00 a.m. to noon at the Upper Marlboro Research and Education Center located at 2005 Largo Road, in Upper Marlboro, Maryland. For more details and directions give me a call, or go to the MGGA web site at: http://www.marylandwine.com/

Bay Area Fruit School
February 23, 2005

Attention all fruit growers! Plan to attend the Bay Area Fruit School on February 23, 2005 at the WYE Research and Education Center in Queenstown, Maryland. This all day meeting will provide Private Pesticide Applicator Recertification Credit. For full meeting details and registration call Debbie Dant, WYE REC at 410 827-8056, Ext. 115.

WMREC Regional Fruit Meeting
February 24, 2005

If you are a fruit grower be sure to attend the WMREC Regional Fruit Meeting on February 24, 2005, at the Western Maryland Research and Education Center in Keedysville, Maryland. This meeting will provide Private Pesticide Applicator Recertification Credit. For details and registration contact Susan Morren at the Western Maryland Research and education Center at: 301 432-2767, Ext. 315 or by email at: smorren@umd.edu

“Hot on the Trail”
Creating Farm, Art, Garden, and Cultural Heritage Tours in Southern Maryland
By Christine Bergmark
Director of the Southern Maryland Ag Commission

Plan to attend the “Hot on the Trail” workshop on Tuesday, February 15, 2005 at the Hughesville Realtors’ Center (on Rt. 5, just south of 231) Hughesville, MD from 9:00 am - 4:00 pm for an exciting and entertaining all-day workshop that will explore ways to package and market cultural heritage tourism, connecting farmers, artisans, gardens and cultural heritage sites in Southern Maryland.

Speakers will include:
Becky Anderson, Director, Handmade in America Institute (www.handmadeinamerica.com) Becky will look at the Heritage Trails activities in Western North Carolina and explore opportunities for Southern Maryland, providing innovative ideas for cultural tourism and opportunities for local crafts people and artisans.
Bill Carson, Orchardist, Story-teller of the Orchard at Altapass.

Bill will provide a lively and fascinating discussion on his experience combining agritourism with music, story-telling, dancing, monarch butterfly fostering, local crafts and hiking trails.

$10 covers lunch and workshop. RSVP by February 10, 2005 by calling So. Maryland, So Good at 301-274-1922 or 800-762-5673.

In case of cancellation due to snow or inclement weather, please call 301-274-1922 and enter 29# to hear a recording.

Agritourism – The Nitty Gritty
By Christine Bergmark

Director of the Southern Maryland Ag Commission

Plan to attend the "Agritourism - The Nitty Gritty" an agritourism workshop on Wednesday, February 16, 2005 at the Hughesville Realtors' Center (on Rt. 5, just south of 231) Hughesville, MD from 9:00 am - 4:00 pm.

AGENDA
9:00 Registration and Welcome
9:15 Growing Tourism Country Style - Jane Eckert, Eckert AgriMarketing
10:15 Farmer Experiences - Example of a B&B, Livestock and Market Farm by Betsy Pritchard - Smith Meadows, Berryville, MD
10:45 Ag Tourism in Maryland, Clarke's Elioak Farm Farms, Children and Education - Ginger Myers, Howard County Economic Development
11:30 Lunch & Key Note Address “Providing the Farm Experience: AgriTourism That Pays Off” - Jane Eckert, Eckert AgriMarketing
1:00 Marketing 101: Agritourism in Maryland - Jane Eckert, Eckert AgriMarketing
2:00 Liability/ Legal Issues and Insurance on the Farm - Toby Treem, University of Maryland & Jim Maetzold, National Alternative Enterprises and Agritourism Leader, NRCS/ USDA
3:00 Planning and Zoning, and Food Processing on the Farm in Maryland Discussion - Ginger Myers, Howard County Economic Development
4:00 Wrap up

$10 covers lunch and workshop. RSVP by February 10 by calling So. Maryland, So Good at 301-274-1922 or 800-762-5673.

In case of cancellation due to snow or inclement weather, please call 301-274-1922 and enter 29# to hear a recording.

Introduction to Farming Short-Course
March 7, 14 & 21st, 2005

Whether you grew up on a farm or not, you may need to sign up for this Introduction to Farming Course. This three-day course will open your eyes to the world of farming. A course designed for the young and old alike. It just may make a farmer out of a “city kid” or a “hayseed.” Money Back Guarantee! The spring classes will be conducted at the Davidsonville Family Recreation Center (DFRC). Make plans to attend.

SMRFM Hay & Straw Auctions
The Southern Maryland Regional Farmers Market wishes to remind you of the upcoming Hay and Straw Auctions, which are scheduled for the first and third Saturday morning at 10:00 a.m. beginning in November. Assorted lot sizes are auctioned at a low sellers 5% commission. Cash or check required at the time of sale. The auctions will run through April on the following dates: January 15th, February 5th & 19th, March 5th & 19th, and April 2nd & 16th.

If you have hay or straw to consign, or are an interested buyer, then please contact Margie Wilkinson at the market office, at 800 533-FARM or call Bob Chase at 410 798-1580. See the table for the latest auction results:

<table>
<thead>
<tr>
<th>Sale Date</th>
<th>Product Name</th>
<th>Low Price</th>
<th>High Price</th>
<th>Avg Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/18/2004</td>
<td>Alfalfa</td>
<td>$5.00</td>
<td>$5.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>12/18/2004</td>
<td>Lespedeza</td>
<td>$3.50</td>
<td>$3.80</td>
<td>$3.60</td>
</tr>
<tr>
<td>12/18/2004</td>
<td>Mixed Grass</td>
<td>$2.00</td>
<td>$3.00</td>
<td>$2.85</td>
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<tr>
<td>12/18/2004</td>
<td>Orchard Grass</td>
<td>$2.75</td>
<td>$3.00</td>
<td>$2.94</td>
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<tr>
<td>12/18/2004</td>
<td>Orchard Grass</td>
<td>$3.00</td>
<td>$3.00</td>
<td>$3.00</td>
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<tr>
<td>12/18/2004</td>
<td>Round Bale</td>
<td>$25.00</td>
<td>$29.00</td>
<td>$26.50</td>
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<tr>
<td>12/18/2004</td>
<td>Shelled Corn (bushel)</td>
<td>$3.00</td>
<td>$3.60</td>
<td>$3.40</td>
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<tr>
<td>12/18/2004</td>
<td>Straw</td>
<td>$2.50</td>
<td>$2.50</td>
<td>$2.50</td>
</tr>
</tbody>
</table>

Tobacco Seed Distribution Program

It is time to make your tobacco seed requests. The varieties available this year will be MD 609, MD 201, MD 341, MD 40, MD 402, and MD 602 - same as last year. These varieties will be packaged in 1-ounce packets, and made available at seed distribution sites and county Extension offices. All varieties will be available in the pelletized form by request. The form for pelletized seed request will be available at Upper Marlboro Research and Education Center. If you need pelletized seed fill out and fax the form to Alfred Hawkins at 301 627-3273. Any questions or requests regarding this program should be addressed to Alfred Hawkins, Tobacco Seed Production Administrator, at 301 627-8440.
2004 Pumpkin Spray Program  
Wye Research and Education  
Center  
By Caragh Fitzgerald  
Extension Educator, Agriculture

Variety Trial—Conventional  
First spray 7/27/04, Bravo® + Champ® (#1).  Spray every 7 days, alternating between #1 and #2.  Last spray 9/10/04.  

Cost/Acre per Application  
1. Bravo® WeatherStik (3 pt./A.) + Champ® DF (57.6%) (1.3lbs/A) $20.13 + $5.53 4 sprays total  
2. Pristine® (16 oz/A) $33.50 3 sprays total  
**Total cost: $203.14**

Variety Trial—Reduced Risk  
First spray 7/27/04, Serenade® + Champ® (#1).  Spray every 7 days, alternating between #1 and #2.  Last spray 9/10/04.  

Cost/Aper Application  
1. Serenade® 10WP (4.0 lbs/A) + Champ® DF (57.6%) (1.3lbs/A) $22.36 + $5.53 4 sprays total  
2. Pristine® (16 oz/A) $33.50 3 sprays total  
**Total cost: $212.06**

Pumpkin Time Line  
**September 29, 2003** - Drill Hairy Vetch @ 25 lb/Acre  
**May 25, 2004** - Roll and Spray Vetch with Gramoxone®  
**May 27, 2004** - Plant pumpkin seed in Jiffy®-7’s cells  
**June 4, 2004** - Spray field with Gramoxone® and Pounce® (cutworms)  
**June 8, 2004** - Spray field with Prefar® & Drench-apply Admire® (cucumber beetles) on pumpkin seedlings before planting.  
**June 9, 2004** - Transplant with starter fertilizer & Irrigate with 1/2 inch  
**July 27, 2004** - Fungicide spray program begins  
Sprays applied on a 7-day schedule  
**September 10, 2004** - Last spray  
**September 20, 2004** - Begin pumpkin harvest  
Notes: Irrigation applied as needed.  Fungicide sprays applied with a Hardee cannon-type air-blast sprayer @ 60 GPA.

<table>
<thead>
<tr>
<th>2004</th>
<th>Number of Ripe Fruit^2 (per acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety^1</td>
<td>Fungicide Treatment^3</td>
</tr>
<tr>
<td></td>
<td>Conv.</td>
</tr>
<tr>
<td>Dependable</td>
<td>3711</td>
</tr>
<tr>
<td>Pro-Gold 510</td>
<td>2474</td>
</tr>
<tr>
<td>Reliable</td>
<td>3818</td>
</tr>
<tr>
<td>Harvest Time</td>
<td>3388</td>
</tr>
<tr>
<td>REX 1003</td>
<td>2796</td>
</tr>
<tr>
<td>Gold Medal</td>
<td>2689</td>
</tr>
<tr>
<td>Gold Gem</td>
<td>3711</td>
</tr>
<tr>
<td>REX 1002</td>
<td>2151</td>
</tr>
<tr>
<td>Magic Lantern</td>
<td>4948</td>
</tr>
<tr>
<td>REX 1002 (5 plants)</td>
<td>1882</td>
</tr>
<tr>
<td>REX 1003 (5 plants)</td>
<td>2474</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2004</th>
<th>Average Ripe Fruit Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety^1</td>
<td>Fungicide Treatment^3</td>
</tr>
<tr>
<td></td>
<td>Conv.</td>
</tr>
<tr>
<td>Dependable</td>
<td>23</td>
</tr>
<tr>
<td>Pro-Gold 510</td>
<td>16</td>
</tr>
<tr>
<td>Reliable</td>
<td>18</td>
</tr>
<tr>
<td>Harvest Time</td>
<td>24</td>
</tr>
<tr>
<td>REX 1003</td>
<td>19</td>
</tr>
<tr>
<td>Gold Medal</td>
<td>21</td>
</tr>
<tr>
<td>Gold Gem</td>
<td>18</td>
</tr>
<tr>
<td>REX 1002</td>
<td>22</td>
</tr>
<tr>
<td>Magic Lantern</td>
<td>14</td>
</tr>
<tr>
<td>REX 1002 (5 plants)</td>
<td>21</td>
</tr>
<tr>
<td>REX 1003 (5 plants)</td>
<td>19</td>
</tr>
</tbody>
</table>

1 All treatments had 9 plants per replication except for ID 10 and ID 11, which had 5 plants per rep.  
Each plot was 270 ft^2.  
2 Averaged across 3 replications per fungicide treatment and extrapolated to a per acre basis.  
3 Fungicide treatments were conventional (conv.) or reduced risk (red.risk)
Subscribe to Pest Net
By Galen Dively
Professor, Entomology/IPM
University of Maryland

Pest Net is a weekly electronic newsletter of pest management information for MD and links to IPM information from other states in the Mid-Atlantic region. It is posted on the MD IPM website www-mdipm.umd.edu and published in the Delmarva Farmer each week. You can be notified of a new Pest Net issue by subscribing below.

To subscribe to Pest Net: Send an email to listserv@listserv.umd.edu. The body of the email should contain the line: subscribe pestnet-information 'your name'. Insert your name and send the message from the email address to which you want the notification sent.

To unsubscribe to Pest Net: send an email to listserv@listserv.umd.edu, the body of the email should contain only: 'unsubscribe pestnet-information'

If you have any difficulty subscribing or unsubscribing to the list, please send email to alwilson@umd.edu.

Pest Warning

Swede Midge: A New Pest Concern

FOR INFORMATION; DA- 2004-36; September 23, 2004
SUBJECT: Presence of the Swede midge, Contarinia nasturtii (Kieffer) in the United States
TO: STATE AND TERRITORY AGRICULTURAL REGULATORY OFFICIALS

On September 20, 2004, two Cecidomyiidae specimens from Niagara County, New York, were confirmed as Contarinia nasturtii (Swede midge). These males were trapped in experimental pheromone traps that Cornell Cooperative Extension Service is field-trialing in North America with the Swiss Federal Research Station for Horticulture. These are the first detections in the United States.

The Swede midge has been a known pest of crucifers in Canada since 2000; although, it probably had established in Ontario several years before it was identified. The Swede midge (also known as the cabbage midge or crown gall fly) is a Eurasian pest of crucifers. "Blind heads" on broccoli, cabbage, cauliflower and other crucifers are typical of Swede midge infestation. Swede midge larvae damage the terminal growing points of crucifers, causing disruption or cessation of growth in these tissues. In older plants, Swede midge larval feeding can cause twisted or missing broccoli or cauliflower heads, split terminals, swollen tissue, and crinkled heart leaves or other distortions. Plants infested as seedlings produce no marketable yield. Symptoms may mimic molybdenum deficiency, hormonal herbicide damage, genetic variability, heat stress, and frost damage. Swede midge damage can resemble other common conditions in these crops, such as mechanical cultivation wounds or feeding by other pests, and leaves a typical "corky" scar.

Adults are 1.5 mm brownish flies similar to the over 60 other Contarinia species in North America. In Ontario, Swede midge adults emerge continually from the end of May until the middle of September and apparently produce three to five overlapping generations in a season. The eggs hatch within three days and the larvae live for up to 14 days. Then they drop to the ground to pupate in the top 5 cm of soil. New adults emerge approximately 14 days later. The Swede midge over winters as a larva in the soil; some may stay in the soil for more than one winter making long-term crop rotation important.

Swede Midge New Pest Response Guidelines are completed in draft and are due for publication shortly. A pest alert describing the Swede midge is available on the APHIS website: http://www.aphis.usda.gov/ppq/ep/swedemidge.html

September 19, 2004

U.S. Soybean Rust Update
By Arvydas Grybauskas
Associate Professor Plant Pathology
Dept of Natural Resource Sciences and Landscape Architecture University of Maryland

Well it has happened. Please see the enclosed USDA press release which came out just a few hours ago. Soybean rust has appeared in the US a little sooner rather than later, but fortunately at the tail end of the season. This does not mean we will have a problem next season but the odds have certainly increased dramatically, and the watch level is going to be much higher for everyone. It also means we will have some very specific reporting rules for any suspected cases. More on this as I know about it.

USDA CONFIRMS SOYBEAN RUST IN UNITED STATES

WASHINGTON, Nov. 10, 2004 – The U.S. Department of Agriculture’s Animal and Plant Health Inspection Service today confirmed the presence of soybean rust on soybean leaf samples taken from two plots associated with a Louisiana State University research farm Saturday.
While this is the first instance of soybean rust to be found in the United States, the detection comes at a time when most soybeans have been harvested across the country. As a result of the harvest, the impact of the fungus should be minimal this year.

Soybean rust is caused by either of two fungal species, Phakopsora pachyrhizi, also known as the Asian species, and Phakopsora meibomiae, the New World species. The Asian species, the one found in Louisiana, is the more aggressive of the two species, causing more damage to soybean plants.

USDA will dispatch its soybean rust detection assessment team, composed of scientific experts and regulatory officials, to the site within 24 hours. The assessment team will work closely with Louisiana State Department of Agriculture representatives to assess the situation and conduct surveillance around the detection site to determine the extent of the disease spread.

Soybean rust is spread primarily by wind-borne spores capable of being transported over long distances. At this point in time, based on predictive models, APHIS believes that the detection in the U.S. is related to this year’s very active hurricane season. While the harvest for this year is complete, during next year’s planting season, producers will need to watch for symptoms of the fungus such as small lesions on the lower leaves of the infected plant that increase in size and change from gray to tan or reddish brown on the undersides of the leaves. USDA and the soybean industry have been cooperating on awareness efforts and will amplify those efforts now that the disease has been found in this country. Lesions are most common on leaves but may occur on petioles, stems, and pods. Soybean rust produces two types of lesions, tan and reddish brown. Tan lesions, when mature, consist of small pustules surrounded by slightly discolored necrotic area with masses of tan spores on the lower leaf surface. Reddish brown lesions have a larger reddish brown necrotic area, with a limited number of pustules and few visible spores on the lower leaf surface. Once pod set begins on soybean, infection can spread rapidly to the middle and upper leaves of the plant.

Soybean rust can be managed with the judicious use of fungicides. However, early detection is required for the most effective management of soybean rust. Monitoring soybean fields and adjacent areas is recommended throughout the growing season.

Fungicide applications can reduce yield loss, depending on the plant developmental stage, time when soybean rust is detected, and fungicide application method. Efficacy information for producers on fungicides is available through state university extension services.

For more information, visit APHIS’ soybean rust “hot issues” Web site at www.aphis.usda.gov/lpa/issues/sbr/sbr.html

Website Directory of Maryland Farms, Markets, Agribusinesses, and Organizations
By Dale Johnson Extension Specialist, Farm Management University of Maryland
As a stakeholder in the Maryland Agriculture, I would like you to be aware of the website: www.marylandagriculture.info
This website is a Directory of Maryland Farms, Markets, Agribusinesses, and Organizations. Through simple directory trees, you can search listings by type and/or location. If you are looking for an agricultural entity in Maryland, this website maybe the easiest place to find it. I would encourage you to link this website to any Maryland agricultural webpage that you may have. If you know of farms or agribusinesses that should be listed on this webpage, please refer them to us.

Try www.marylandagriculture.info out by viewing the farm listings. We have some interesting farms in Maryland and you may even find one where you may want to purchase fresh and local produce.

The 2004 Preliminary Soybean Variety Tests
By Bill Kenworthy, Agronomy Professor, NRSL University of Maryland
The 2004 Preliminary Soybean Variety Tests have been posted at http://www.nrsl.umd.edu/extension/crops/soybeans

The 2004 Corn Hybrid Performance Tests
By Bob Kratochvill, Extension Specialist, Agronomy Crops University of Maryland
Just a quick note to inform you that the final version of the 2004 Corn Hybrid Performance tests Agronomy Facts #54 - Corn Hybrid Performance (final version) is now posted to the College's Cropping Systems webpage: www.mdcrops.umd.edu

Endophyte Benefits to the Tall Fescue Plant
The fungal endophyte (Neotyphodium coenophialum) normally in tall fescue furnishes many benefits that are lacking in endophyte-free tall fescue, even though animal performance is greatly improved. A mutualistic relationship exists between the endophyte and the host tall fescue plant. The benefits for
the endophyte include food (sugar and amino acids), protection within the plant, and dissemination through the seed. In return, the host plant receives increased disease resistance, improved drought tolerance through better root development and water conservation in the plant, tolerance to some pests, improved utilization of nitrogen, greater seedling vigor, more tillers, and greater growth. Reduced palatability, lower animal intake, and deeper burial of crowns result in greater grazing tolerance of toxic tall fescue. Novel (non-toxic) endophyte tall fescue provides excellent animal performance and also appears to have most of the plant benefits of toxic tall fescue in respect to drought tolerance and pest resistance. However, endophyte strains vary in their benefits to different tall fescue cultivars and will require lengthy field testing under grazing to determine their tolerance to various environmental stresses.

When the first endophyte-free (E-) cultivar ‘AU Triumph’ was released, it appeared to offer a definitive solution to the problems of endophyte-infected (E+) tall fescue. Animal performance was excellent but cattle producers who planted it reported that seedling vigor, grazing tolerance, and drought resistance were much less than typical ‘KY 31’ E+ tall fescue. The result was serious stand losses, especially when pastures were overgrazed during summer. Farmers continued to depend on KY 31. Few people suspected that the fungal endophyte lived in a mutualistic relationship and provided many benefits to the host plant. This discussion will summarize present knowledge of endophyte benefits to the tall fescue plant.

**Enhanced Seed Germination, Growth, Tilling, and Seed Production:**

Seed germination is higher in many E+ than E- tall fescue genotypes. Herbage, root biomass, and tiller development of E+ are greater than E- seedlings. The mechanism of these changes may include enhanced photosynthetic rates which occur with endophyte infection. These benefits of endophyte infection can easily account for the superior initial seedling growth and stands of E+ as compared to E- tall fescue often reported by farmers. Seed production is also affected by endophyte infection. The percentage of filled tall fescue seeds produced by E+ plants is twice that of E- plants. In addition, seed yields are higher in E+ than E- tall fescue.

**Enhanced Drought Tolerance and Stand Persistence:**

Drought stress is the most limiting factor to tall fescue adaptation and stand persistence, particularly in the southern part of its adaptation range. Endophyte infection is the major factor in drought tolerance and stand persistence, imparted by both anatomical and physiological mechanisms. Root growth under drought stress is improved in E+ as compared to E- tall fescue. In some studies, drought resulted in more leaf rolling and thicker leaves of E+ than E- tall fescue, contributing to water conservation. However, the lack of leaf rolling in other studies suggests that genotypes vary in this response. Stomatal closure, a common water-conserving method, has been reported to be greater in E+ than E- plants. Water-stressed E- tall fescue did not accumulate glucose or fructose in leaf sheaths while E+ plants accumulated significant amounts that could contribute to cell osmotic adjustment. This observation supports the conclusions of some researchers that the endophyte promotes persistence of vegetative tillers by changing osmotic potential of cell sap which is important for tissue survival during drought and for regrowth.

**Nutrient Uptake:**

The superior growth and color of E+ as compared to E- tall fescue suggests that plant nutrient uptake may be affected. Nitrogen use efficiency is increased by endophyte infection. This efficiency is greater at medium and high than at low levels of nitrogen. Uptake of phosphorus is also greater in E+ than E- tall fescue on low phosphorus soils, giving it a competitive advantage over some other plants.

**Insects:**

Insects are generally a minor problem on tall fescue. However, researchers found that fall armyworms preferred feeding on E- rather than on E+ leaves. Larvae survival on E+ leaves was less than on E- leaves. Leafhopper numbers were greater on E- than on E+ tall fescue in Louisiana.

**Diseases:**

Tall fescue seedling survival from *Rhizoctonia zeae* Voorhees is directly dependent on endophyte infection, resulting in serious losses during establishment of E- stands. Barley yellow dwarf virus is only half as likely to infect E+ as E- tall fescue, a result of greater feeding by aphids which are the primary vector. Crown rust, the most common fungal pathogen of tall fescue, is unaffected by endophyte infection.

**Nematodes:**

Soil nematodes increase the adverse effects of drought stress on tall fescue by feeding on roots, causing high stand losses. Stubby root soil nematode populations were higher in E- than E+ tall fescue in Alabama. In Arkansas, lesion and stunt nematode populations also increased in E- as compared to E+ tall fescue. They also found greater leaf senescence, less green leaf per tiller, and higher canopy temperature in E- tall fescue which indicated reduced capacity for water transpiration.

Endophyte-free tall fescue cultivars re-infected with non-toxic endophyte strains furnish excellent animal performance and appear to have stand survival similar to toxic E+ endophyte tall fescue when grazed in stressful environments. Nematodes are likely an important factor in stand losses, especially on lighter soils, and it has been assumed that resistance to various soil nematode species by non-toxic endophyte was similar to E+ tall fescue. A controlled greenhouse study suggests this assumption may not be correct as lesion nematode numbers per root system of nontoxic endophyte tall fescue were similar to E- tall fescue and 80% higher than toxic E+ plants. This raises a concern that non-toxic endophyte strains may differ in resistance not only to different nematode species but also to various pests and possibly other environmental stresses. The need for careful screening of each non-toxic endophyte x tall fescue cultivar combination is obvious before recommendations on performance are made.
**Competition with Other Plants:**

The competitive advantage of E+ over E- tall fescue in a mixture is well established. Increases in infection rates of mixed stands over time indicate greater interspecific competitive ability. This increase in percentage of E+ vs. E- tall fescue plants varies in pastures, probably as a result of differences in grazing intensity, drought, or other stress conditions. Warm-season grasses such as bermudagrass are much more competitive than cool-season grasses with tall fescue in the southern part of its adaptation region. In these grass sods, E+ is much more competitive than E- tall fescue. Rotational stocking maintained E- tall fescue stands in bermudagrass pasture while continuous stocking resulted in declining stands over a 3-year period.

There is little evidence that endophyte infection of tall fescue affects stand persistence and productivity of associated legumes. When clipped at 3-week intervals, red and ladino clovers were not affected by endophyte status of the associated tall fescue. However, during the third and fourth years of production, alfalfa forage yields in a mixed stand with E+ were only 71% of that with E- tall fescue. Stands of alfalfa were not affected by endophyte infection.

**Grazing stress:**

Grazing imposes biotic stress on pastures by defoliation and trampling, both of which can affect plant persistence. Dry forage intake by cattle grazing E+ may be 24 to 44% less than for cattle grazing E- tall fescue. Much of this reduction is a result of less time spent grazing during daylight hours because of lower heat tolerance in animals suffering fescue toxicity. Grazing pressure is often lower on toxic E+ tall fescue pastures, resulting in more remaining stubble and less stress on plants than in E- pastures. In addition, crowns of E+ tall fescue plants are buried deeper in the soil than E- plants, giving added grazing protection if grazed closely. Thus, E- tall fescue is handicapped with the stresses of grazing and less competitive with E+ tall fescue, other grass species, and weeds.

**Forages for Goats**

By Terry Hutchens, University of Kentucky Forage News, April 2003. 
Adapted by Les Vough, Forage Crops Extension Specialist, University of Maryland

If you are a beef or dairy cattle producer, you may have read about the benefits of grazing goats with cattle. In the 1980’s grazing information coming out of Australia, New Zealand or South Africa was near gospel. Time has shown that information importation was a gateway to present cattle grazing strategies being used in the Southeast and temperate areas of the U.S. Likewise, the importation of goat grazing information from “down-under” can likely be used as an introduction to grazing goats jointly with cattle in the U.S. Australian and African findings confirm that co-grazing of unlike species (goats/cattle) can improve stock productivity of one or both species through enhanced pasture quality and weed control. Producers can maximize investments made in land resources by grazing unused areas of the farm based on plant preference and terrain differences. Likewise, co-grazing can provide additional farm income and improved cash flow by marketing goats from resources presently being dedicated to a single commodity.

**What Do Goats Graze?**

Goats have been classified as intermediate selector feeders. This means that goats have plant preferences that extend to many different plants. However, these preferences are dependent upon forage amount, geographical location, and seasonal variation within the same region. The objective of the goat is to feed upon the highest quality forage available. On the average, African Boer goats have been observed browsing 60% of the feeding time and grazing 30%. Yet, when weather conditions change the quality hierarchy, Boer goats may browse 27% to 86% of the feeding time depending on abundance and quality of the browse. In addition to weather, Boer goats prefer to browse in the morning and graze in the late afternoon. Goats in general graze from the top of the pasture height downward and graze tall feed first. Tall feeds are often weeds and seed heads. These tall feeds are grazed to the side on a horizon plane with the ground and perpendicular to the forage. Unlike sheep and cattle, goats do not like to graze down into the forage canopy where the clovers reside. This would explain the increase in white clover content of pastures after being grazed by goats. White clover is near the bottom of the preferred list for goat grazing. I have personally seen goats graze tall fescue within 1 inch of the ground, carefully avoiding lush white clover plants within the pasture mix. A cattle farmer may classify goats as a renovation tool and use them for removing weed and grass competition from clover renovated pastures.

In a manner of summarizing the above, the following statements can be made about how goats graze. First, goats will predominately browse until quality and quantity of the forage becomes limiting. As both quantity and quality decline, grazing of grasses and forbs dominates the preference. Second, rumination and time spent ruminating decrease with reduction in forage. As forage quantity/quality declines, standing and walking activities increase. Reduction in rumination and rest-time increases the energy maintenance level for grazing goats, thus reducing the amount of energy available for growth and productivity.

These observations confirm that goat productivity is directly related to the availability of superior quality and desirable forage. Once the forage component becomes compromised, productivity declines. However, it is important to note that goats graze differently than cattle. When a variety of forage plant choices are available for goats, little or no forage competition or overlap will occur. Overlap will occur on pastures made up on one or two predominant pasture species and in these cases stocking rates become an important aspect of grazing management. Therefore, severe slopes covered with brush and brambles exclude cattle from certain sections of the farm while goats may see areas containing a smorgasbord of culinary opportunity.
Computer Spreadsheets Available for Goat and Sheep Production:
By Susan Schoenian, Extension Educator

The following Excel spreadsheets can be downloaded from the Maryland Small Ruminant Page: www.sheepandgoat.com.

1. Sheep and Meat Goat Ration Evaluator
2. Comparing Nutrient Costs
3. Sample Meat Goat Enterprise Budget
4. Sample Sheep Enterprise Budget
5. Comparing Marketing Alternatives

The Ration Evaluator enables the user to evaluate a ration to determine if it meets the requirements of the animals that are being fed. Comparing Nutrient Costs allows the user to compare the per lb. cost of protein and energy as supplied by different feedstuffs. The Meat Goat and Sheep Budgets are enterprise budgets that can be used to determine the expected profitability of a sheep and/or goat enterprise based on the user's resources, management, feeding, and marketing practices. Comparing Marketing Alternatives can be used to compare the net price obtained from marketing lambs/kids: 1) off the farm; 2) through a local auction market; 3) through a regional auction (such as New Holland); and 4) to a middleman, such as an order buyer or meat processor.

Persons who do not have Internet access can request the spreadsheets from Susan. The spreadsheets work with Excel, Quattro Pro, and Star Office.

Maryland Sheep & Goat Directory
By Susan Schoenian, Extension Educator

As of 12/08/04, there were 196 entries in the Maryland Sheep & Goat Directory, initiated last year to help producers market their breeding stock, market animals, and other sheep and goat products. The directory is open to all breeds of sheep and goats and to producers in any state or province. Entries can be made online to the directory. A form can also be downloaded from the web site. For persons without access to the Internet, a form can be requested from the Western Maryland Research & Education Center. Printed forms can be mailed or faxed. Deletions, corrections, and additions to directory listings can be requested by e-mailing Susan Schoenian or Susan Morren at sschoen@umd.edu or smorren@umd.edu.

http://wwwsmallfarmsuccess.info/sheepandgoat.cfm

Editor's note: Many producers have reported making sales as a result of their listing in the Maryland Sheep & Goat Directory.

Nutrient Management Update
By Krista Wilson
Nutrient Management Advisor
Manure Can Save You Money on Fertilizer Costs

Manure is such a valuable resource, yet few of us utilize it to its full potential. Packed with macro and micronutrients, manure is a free fertilizer which is produced right on the farm. With fertilizer costs on the rise, it is more important than ever to utilize manure for its nutrient content. All one needs to do is take a proper manure sample, get it analyzed, and figure out how many tons of manure per acre are spread by their spreader, which tells us how many pounds per acre of each nutrient (N, P, & K) are being provided to the crop.

In order to take a sample of solid or semi-solid manure, a representative sample must be obtained. For many producers, the easiest way to do so is to sample when manure spreading is about to commence. Since nutrient contents change during storage, sampling at this time is advantageous because one gets the best estimate of the nutrient content at the time it is about to be spread. Simply grab one or more shovelfuls of manure and bedding material per load, ending up with 10-15 shovelfuls in a bucket, mixed thoroughly. If only one load is to be spread, grab 10-15 shovelfuls of manure and bedding material from different depths and locations of the spreader and mix well in a bucket. This is a composite sample. In order to prepare the laboratory sample, take several scoops of manure and bedding material from the composite sample in the bucket and place in a plastic zip lock bag (or other container provided by the manure testing laboratory). Be sure to label the bag with your name and the type of animal the manure came from.

Another method that can be used is the sheet method, where you can sample while you're spreading. Ten to fifteen plastic sheets are laid out in the path of the spreader to catch some manure from each load being spread. This method can also be used to figure out the rate at which your spreader applies manure to your fields (tons per acre). Some manure and bedding material is then taken from each sheet to make the composite sample, which should then be mixed and sub-sampled, as mentioned above.

For solid manure that is stored in a pile, 10-15 shovelfuls should be collected from various depths and locations within the pile, avoiding the weathered, surface manure. This composite sample should be mixed thoroughly, and then sub-sampled and prepared for shipment as mentioned above. A list of manure testing laboratories and the prices they charge for analysis is available on our office's web site (see sections G1-labs). Contact information entitled, “Alternative Soil Testing Labs” & G2-prices for analysis entitled, “Comparison of Manure Testing Labs”:


As always, you can contact your county's Nutrient Management Advisor to obtain more detailed information on sampling manure and for assistance with calibrating your manure spreader. Your county's Nutrient Management Advisor can also develop a Nutrient Management Plan for
your operation that will utilize those free nutrients from your manure, and advise you of how much additional fertilizer will be needed to obtain optimal crop growth and yields.

Nutrient Management Farmer Training & Certification Southern Maryland

Opportunities to Write or Update Your Own Nutrient Management Plan

The Maryland Department of Agriculture, in cooperation with the University of Maryland and Maryland Cooperative Extension, is organizing training workshops to assist farm operators in managing and utilizing nutrients in their operations, and to certify operators to write their own nutrient management plan. Several different types of workshops have been planned to match the various types of farming operations throughout the state. All regulated farm operations must have submitted a nutrient management plan by March 1, 2005.

A workshop for farm operators with crops using only commercial fertilizer (no animal or organic nutrient source use) will be held in St. Mary’s County. The plan-writing workshop will require a two-day commitment. The first day of training will focus on the elements of your particular operation necessary for the development of a nutrient management plan. The second day will include a short “open book” certification exam. After the exam, participants will develop a nutrient management plan for their own operation. Assistance will be provided for plan development. About 95% of past participants have been certified and have completed a nutrient management plan. The cost of the workshop is $35, which includes the certification fee, as well as lunch and refreshments the first day. (Snow dates 1/28 and 3/04)

This workshop is a good educational opportunity, and helps farmers who have no plan, have a Justification for Delay form, or currently have a nutrient management plan, to become certified to write or update their own plan. These training classes will also be accepted in lieu of nutrient application voucher training.

If you are interested in writing your own plan, please fill out the form below and mail to Maryland Nutrient Management Program, Maryland Department of Agriculture, 50 Harry S Truman Pkwy, Annapolis, Maryland 21401. Contact the Nutrient Management Program at 410-841-5959 if you have questions about the training.

Risk Assessed Management (RAM): RAM suggests using a combination of CRC crop insurance coverage and forward pricing tools to maximize income in good and bad years. With February 2004 CBOT corn prices averaging $2.83 per bu. for the harvest time contract and fall prices in the low $2.00 range, growers who practiced RAM are expected to realize a reward of about $0.60 or more per bushel - A nice reward for practicing RAM.

Reminder to Report Notice of Damage or Loss: The policy requires notice within 72 hours of discovery of damage, before the destruction of the crop and within 15 days after the earlier of harvesting completion (by crop by farm unit) or the end of insurance period (12/10 for corn and soybeans). The purpose is to give a loss adjuster the opportunity to help producers document the yield, quality and causes of loss to support a claim. Remember too that with CRC (Crop Revenue Coverage) a loss payment can result with a near normal yield because of the decline in fall prices (see illustration in RAM). IF IN DOUBT – FILE NOTICE!

Planning for 2005

As harvesting is being completed, its time to begin to make management decisions on next year’s crops. It’s a good time to make early decisions on seed brands/varieties, fertilizer and chemicals, while the 2004 performance results are still fresh in your mind. It also prepares you to make early orders for maximum discounts.

If you’re interested in considering insuring your crops/animals on a whole farm gross income basis, now is the time to contact a crop insurance agent for details. The Adjusted Gross Revenue-Lite (AGR-L) insurance plan provides protection from reductions of income from natural disasters and market price fluctuations at up to 80% of the previous 5 year average based on your IRS schedule F. 1040 forms. You must act quickly sales close for the AGR-Lite 2005 production year on January 31, 2005. For full AGR-Lite program details contact an RMA agent or access on-line publications at: http://www.rma.usda.gov/.

CONTACT A CROP INSURANCE AGENT FOR MORE INFORMATION ON THE ABOVE ITEMS.

Gene Gantz, RMA USDA 717-497-6398

Crop Insurance News – December 2004

Cash Market Prices As of 12/10/04

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By the Doane Economists
New Blueberry Variety Research Trial
In 2005 At the Central Maryland REC, Upper Marlboro

By Ben Beale, Extension Educator

Several members of the University of Maryland fruit research team met to prepare for a new blueberry variety research trial at the University of Maryland Central Maryland Research and Education Center, Upper Marlboro Facility. Principal investigators of the blueberry study include: Ben Beale (project leader), Joe Fiola, Dave Myers, Herb Reed, Mark Spicknall, and Alfred Hawkins. The following is a summary of the discussion concerning the design and preparation of the blueberry study by the CMREC, Upper Marlboro fruit research team:

The blueberry project will replace the former apple variety study that was removed in the winter of 2004. The apple orchard consisted of an area 60 feet by 200 feet and is currently undergoing a renovation process. It was noted that no herbicides have been applied since the summer of 2003 to the orchard site. The blueberry plot design calls for 5 rows 200 feet long on 12 foot centers. The plants will be planted at a 4 foot in row spacing. This will allow for a trial of 12 varieties consisting of 4 plants per plot replicated 4 times. The middle row falls on an old orchard row; however, there is no appreciable difference in soil test and herbicide residual should not be a problem.

The team felt it would be very hard to do a split block design with a variety trial and soil amendment comparison. If needed, one end of the orchard would be used to do a small comparison of un-amended ground with 4 or 8 standard variety plants. During the meeting the team reviewed information on Northern and Southern Highbush varieties recommended by other states and recently released lines. It was decided that a couple of Rabbit Eye varieties be added to the trial. A Northern Highbush variety such as Bluecrop was chosen to represent an industry standard or control.

Soil test for the orchard site indicated a pH of 5.7-6.2 and OM of 1.7-1.4 on a Sandy Loam soil. The team decided to use elemental sulfur to lower pH. It was calculated that the site would need 1500 lbs/acre of sulfur to lower a loam soil at 6.0 to 4.5 pH. This equates to about 400 lbs of sulfur on a 200’x60’ parcel. Organic matter will also be added be to the entire study area. It was noted that organic amendment sources existed nearby such as leaf compost from the county, composted poultry carcasses, or composted dairy manure from Beltsville. The team agreed that the leaf compost would probably work and would be available in large quantities. The material would be spread and worked in as soon as possible. The raised beds would be formed with the plastic mulch layer in the spring. The use of sawdust or other material would be required in the spring to use as bed surface mulch after planting.

Blueberry Project Action Items:
- Spray existing vegetation with Roundup®
- Take nematode samples.
- Spread sulfur and incorporate by chisel plowing.
- Incorporate organic matter.
- Identify plant sources and order blueberry bushes.

Summary of Comments from Ben Beale’s Discussion with Dr Mairland Regarding Blueberry Production

Dr. Mike Mairland, Professor, Emeritus
Blueberry & Muscadine Grapes
Phone: 910-675-2314
Castle Hayne Research Station, North Carolina

Dr. Mairland’s General Comments:
- Southern Highbush was developed for southern areas where Northern Highbush could not receive adequate chilling hours (550 chilling units).
- Southern Highbush is not more heat tolerant than Northern Highbush. It may blossom earlier than Northern Highbush varieties and thus may require frost protection.
- Dr. Mairland thought there would be no advantage to growing Southern Highbush if the Northern Highbush could be grown.
- Rabbiteye will come in about one month after Highbush. Rabbiteye are very vigorous plants that require heaving pruning. They are the best adapted blueberry for adverse soils.
- Southern and Northern Highbush should be chosen based upon soil and site adaptation as the primary factor.

Soil & Site Adaptation:
- Check drainage of soil one-year prior: Dig 12-18” deep holes and check for perking.
- Do not modify the planting hole with organic matter and place plant within—you are creating a swimming pool effect. The entire site must be modified.
- Use raised beds if drainage is a problem. If raised beds are used, you must be very diligent with irrigation in summer as these soils tend to dry out much faster as well.
- pH target should be around 4.8 to allow for a cushion—be happy if the resulting pH is from 4.5-5.0. A low pH can be as detrimental as a high pH.
- Use sulfur for adjusting pH. Wettable sulfur is most effective for achieving a fast reaction and pH change. Pelleted sulfur also works well but is not as effective (70-80% sulfur).
- Wettable sulfur can also be used as a side-dress to each side of the plant to lower pH quite effectively in existing plantings.
- O. M. should be light and fluffy. The material should not become sticky when wet. Material such as composted leaves or composted sawdust should work.
• If using raised beds, try to have natural drainage in between the rows: Getting water away from the site is critical.
• Spacing is normally 10 x 4 or 5. He does not recommend going wider than 11’. Nine foot spacing probably requires an orchard-type tractor.
• Drip irrigation with one line on each side, be careful in choosing dripper space & line rates to ensure as much area as possible gets wetted. Spinner type micro-irrigation works extremely well.

Variety Selection:

<table>
<thead>
<tr>
<th>Legacy</th>
<th>Jubilee</th>
<th>Oneal</th>
<th>Duke</th>
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<tr>
<td>Blueray</td>
<td>Bluecrop</td>
<td>Liberty</td>
<td>Aurora</td>
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<tr>
<td>Premiere</td>
<td>Brightwell</td>
<td>Ozark Blue</td>
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The variety selections were based upon adaptability to site and current success.

Legacy - A northern variety that has southern parentage. Developed at Beltsville in collaboration with New Jersey, well adapted to a variety of sites may require frost protection.

Jubilee – A Mississippi release with good adaptation.

Oneal - Standard variety for much of the South - A little better soil adaptation.

Duke - Gaining fast in popularity. Straight Northern Highbush - a popular variety because it blooms and ripens early.

Blueray - Straight Northern High Bush variety - local growers are recommending success with this variety.

Bluecrop - A standard for New Jersey - good for comparison.

Liberty & Aurora - New releases from Michigan that show good promise.

Premiere & Brightwell - Rabbiteye varieties that perform well and produce good fruit. Provide for late season harvest.

Ozark Blue - A late Southern Highbush from Arkansas - New release with good potential and site availability.

CMREC Upper Marlboro

Vineyard Summary

Southern Maryland Vineyard Team

By Ben Beale, Extension Educator

The Upper Marlboro

Research Vineyard was established to evaluate the grape growing potential for the Southern Maryland region. One of the primary objectives was to identify varieties which would perform well in terms of both quality and production in the hot, humid climatic conditions of Southern Maryland.

Yearly Summary of Activities and Accomplishments

2001:
• Vineyard planted on April 4, 2001 utilizing a 10 feet between row and 6 feet in row spacing.
• 27 varieties totaling 864 total vines were planted on 3309 rootstock

2002
• Winter injury was noticeable on some vines.
• Dryer year with minimal disease pressure. Spray schedule was sufficient for disease and insect control.
• Cords were established and vines were trained using Vertical Shoot Position system.
• A very minimal harvest was taken on select vines.

2003
• An unusual winter with mild fluctuating temperature resulted in significant winter injury
• Above average rainfall resulted in heavy disease pressure, especially Downy Mildew. Fungicide program was not able to control Downy Mildew pressure, resulting in high losses of foliage. As a result, some grapes did not mature fully.
• First light harvest was taken. Yield and fruit quality evaluated.

2004
• Vines carried over relatively well given heavy disease pressure previous year.
• Another very wet year. Downy Mildew started early, however was controlled with fungicide applications, particularly Ridomil® and Abound®. Phomopsis and Crown Gall became very evident on many vines
• Hail Storm caused minimal damage to foliage and damage clusters.
• Cicada flagging injury to vines and main cords was significant.
• First 10 varieties were chosen for elimination.
• Harvest was again light, except for the Chardonnay and Vidal clones which were acceptable.

2005
• New varieties to be planted in Spring 2005. Overall feasibility analysis of vineyard to be completed.
• Table grapes (6 varieties) planned to be added to vineyard as well.

Vineyard Vine Replacement Summary

Ten varieties will be replaced in the spring of 2005. Vine replacement threshold was based upon a 65% vine survival rate. Those varieties not meeting that threshold are as follows: Cabernet Franc 1C; Cabernet Sauvignon 1C, 337C and 5C; Sangiovese 1C, 2C and 3C; Shiraz/Syrah 1C; Tannat 1C; and Viognier 1C. Vine death for these varieties was hypothesized to be caused by two primary factors. The first was winter injury, especially prominent after the 2002/3 winter season where an early frost was followed by mild fluctuating winter temperatures. The second cause was loss of foliage and vigor from disease pressure caused primarily by downy mildew. A rigorous fungicide program was adhered which is comparable to that used in the field. Varieties that did not exhibit at least fair disease tolerance were thus selected against in this study.
The following is a list of recommended varieties for Spring 2005 Vine Replacements:

**New Variety/Clones**
- Norton
- Seyval
- Chambourcin
- Cabernet Franc
- Russian
- Russian 2
- Southern Mediterranean
- Southern Mediterranean 2
- Primitivo (Southern Italian)
- Vignoles (Missouri)

**Continued Variety/Clones**
- Chardonnay 76C
- Chardonnay 95C
- Cabernet Franc 3c
- Pinot Noir 19C
- Pinot Noir 15C
- Merlot 1C
- Chardonnay 96C
- Pinot Gris 146C
- Petit Verdot 2C
- Shiraz 7C
- Pinot Noir 13C
- Traminette 1C
- Merlot 3C
- Vidal 1C
- Chardonnay Colmar

Field and Machinery Fires

When working with dry materials, such as during harvest times, fire is a very real danger. Dry materials are easily ignited when they come into contact with hot machinery parts. Not only is it possible for the machine to be destroyed quickly, but also the surrounding field area can be a source of fuel for a fire soon out of control. The following sites offer tips for preventing machinery fires. The first site from Iowa Farmer Today includes a picture of a burned combine.

- [http://www.iowafarmertoday.com/04/040911/fire.htm](http://www.iowafarmertoday.com/04/040911/fire.htm)
- [http://www.extension.umn.edu/distribution/cropsystems/DC6481.html](http://www.extension.umn.edu/distribution/cropsystems/DC6481.html)

Horse Farrier’s Tips on Holding Horses

Mari Trosclair, a horse farrier herself, has written this page to address how to hold your horse safely for your farrier, in a way that keeps you, your farrier, and your horse safe. There are several excellent tips provided.

[http://www.hiddencoast.com/horse/articles/holdhorse.htm](http://www.hiddencoast.com/horse/articles/holdhorse.htm)

Acreage Living – Hobby Farms

The number of hobby farms continues to grow. The most recent Ag Census shows that hobby farms comprise 59.3% of total farms in the U.S. By their definition, a hobby farm is a farm that makes under $10,000 per year.

Iowa State University has a Web site with a bi-monthly newsletter targeted to those who live on acreages or have hobby farms. Articles at this site often include safety issues. For example, the Oct-Nov issue includes an article about understanding liability issues when raising livestock.

[http://www.extension.iastate.edu/acreage/](http://www.extension.iastate.edu/acreage/)

Florida AgSafe has a publication for this audience, Safer Tractor Operations for Home and Acreage Owners, which can be found at:

[http://edis.ifas.ufl.edu/AE197](http://edis.ifas.ufl.edu/AE197)

Hobby Farms magazine is a publication for the hobby farmer. Articles in this magazine frequently feature safety information for animal handling and machinery. Information about this publication can be found at:

2004 Newsletter Subscription
Production Pointers
By R. David Myers

*Production Pointers* is a newsletter published quarterly expressly for farmers and the farm community in Anne Arundel and Prince George's Counties, located in Southern Maryland. The newsletter provides information with personal insight to develop professional clientele. Over six hundred individuals currently receive the newsletter by postal mail or email. All aspects of crop production and marketing are opted as topics for discussion. Program emphasis is placed on commercial vegetable and fruit production in order to transition farmers from agronomic to higher value horticultural crops. A primary objective of the newsletter has been the promotion of Extension and other agricultural agency programs. A long-range goal of this publication is the development of a genuine bond between the Extension Educator and area producers. This newsletter is written, and published in the Anne Arundel County Extension office for dissemination using Microsoft Office® software, and is available online at:

http://www.agnr.umd.edu/AnneArundel/newsletter.htm

Check Out Our Updated County Website
Visit us in Cyberspace!!!

Christie Kneipp is our website designer. Christie has recently updated our website, and we hope that you find the additions helpful. The current and past newsletter additions are available for viewing or copy at:

http://www.agnr.umd.edu/AnneArundel/newsletter.htm

An agricultural bulletin page is also available for viewing or copy under our hot topics section at:

http://www.agnr.umd.edu/AnneArundel/agbulletin.htm

"If we desire to avoid insult, we must be able to repel it; if we desire to secure peace, one of the most powerful instruments of our rising prosperity; it must be known that we are at all times ready for war."

George Washington

Rest Well This Winter! &
Be Sure to Attend Extension Events!

R. David Myers

Extension Educator
Agriculture and Natural Resources
Anne Arundel & Prince George’s Counties
Fruits and Vegetables

NACAA
National Association of County Agricultural Agents

NACAA Communication Award
Individual Newsletter
2002 National Winner

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6707 Groveton Drive
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301 868-8783

Anne Arundel Cooperative Extension
7320 Ritchie Highway, Suite 210
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