Dave’s Ramble

Many “Old Timers” have expressed on countless occasions the following, “I remember when I was a kid, dad and mom grew fruit and vegetables in the farm garden, and they never had to spray!” “We had beautiful fruit! Plenty of it! – Oh sure, we would occasionally eat around a worm or cut out a rotten spot.”

Well I’m sure that you have heard the same statements, or have possibly been the sayer. Many of these same statements have recently been used as a catalyst for the organic movement. I have come to some conclusions on this matter and would like to offer the following:

I believe that the statements are truth. It was easier in time past to maintain a home or farm garden with less impact from disease, and insects. However, history has also been a witness to devastating disease and insect epidemics. In fact, the very reason that I am abiding in America today is due to a little potato growing problem in Ireland. Therefore, we can conclude that disease and insects have always been a plague to our fields, orchards and gardens. We need to remind ourselves of the fundamental rules of biological interaction. The biological realm is cruel -- It is survival of the fittest. Any species thrives when there is adequate host, an optimum environment, and plenty of the species present to multiply.

The reasons why we are now forced to spray have already been answered above. We currently live in the most productive generation of mankind. This productivity means that there is an enormous host for diseases and insects to attack. These diseases and insects are present and shared in enumerable numbers from mega-reservoirs. Through our science and ingenuity, we have remained a step ahead of the agricultural attackers. Our agriculture will survive, if we continue to use an integrated approach: Sanitation to reduce the enemy reserves; Crop rotation and diversity to camouflage and hide the host; and the most effective but least harmful control means to reduce the antagonists, unless we also should fall prey.

Calendar of Events

Mark Your Calendars --- Plan To Participate

♦ July 14th – Turf Field Day, College Park, MD
♦ July 29th – Commodity Classic, West Friendship, MD
♦ August 19th – Fruit & Veg Twilight, Upper Marlboro

Inside This Issue

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- Farmers Wanted for Brassica Cover Crops
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- Field Crop Update
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- Tips to Maximize Crop Insurance Benefits
- Forestry Correspondence Course
Paint Branch Turf Research Facility Field Day - Open House - Trade Show July 14, 2004

The University of Maryland Turfgrass Research Field Day will be held on Wednesday, July 14th. This year, the facility will host a full day of events, including tours of current research as well as turf industry exhibits and equipment demonstrations.

At this event we are also pleased to celebrate the completion of our new Plant Preparation Building with a formal dedication by Dr. Bruce Gardner, Dean of the U.M. College of Agriculture. The dedication of the new building will be at noon, followed by a homestyle barbecue lunch.

The Paint Branch Turfgrass Research Facility is at the northern end of the Univ. of Md. campus in College Park. The buildings of the Facility are located at the end of Greenmeade Drive, approximately 0.5 miles from the intersection of Metzerott Rd. and University Blvd. Please park in designated areas as directed on the day of the event.

To register or to acquire additional information about exhibiting, or demonstrating turf-related products or services, please call John Krouse at 301-403-4234.

6th Annual Maryland Commodity Classic Howard County Fairgrounds July 29, 2004

This year crop insurance, Asian soybean rust and value-added enterprises top the agenda for the 6th Annual Maryland Commodity Classic. The event, to be held on Thursday, July 29 from 11:00 a.m. until 4:00 p.m. at the Howard County Fairgrounds in West Friendship, Md., will conclude with a crab feast and beef and pork barbeque.

"This year's Maryland Commodity Classic is a good opportunity for Maryland farmers to meet top officials with USDA-Risk Management Agency, the federal agency charged with the oversight of crop insurance," said Agriculture Secretary Lewis R. Riley. "The Ehrlich Administration is committed to assisting our farmers manage risks to increase their long-term financial success. We're pleased that the USDA-RMA is working with this Administration to improve federal crop insurance and increase its value to Maryland agriculture." Event speakers will include Ross J. Davidson Jr., administrator of the USDA's Risk Management Agency (RMA), who will discuss financial risk tools for the future and provide an update on activities at RMA to improve federal crop insurance products to better meet the needs of farmers in Maryland and the Northeast. Additionally, USDA Risk Management Specialist Gene Gantz will host "Tips to Avoid Traps," a crop insurance workshop where lunch will be provided. Participants also will learn how to prepare for the possible introduction of Asian soybean rust from Dr. Reid Frederick, research molecular biologist with USDA, Agricultural Research Services North Atlantic Area. Farmers and others interested in attending the Maryland Commodity Classic should contact Lynne Hoot at 410-956-5771 for ticket information. The event is sponsored by the Maryland Soybean Board, the Maryland Grain Producers Utilization Board as well as the Maryland Department of Agriculture (MDA) and USDA-RMA. For more information, contact Mark Powell at MDA, 410-841-5770.

Orchard, Vineyard & Specialty Vegetable Twilight & Ice Cream Social CMREC, Upper Marlboro Farm August 19, 2004

Mark Your Calendars! You are invited to attend a twilight wagon tour of the University of Maryland Upper Marlboro Research Farm, on August 19, 2004 from 4:30 p.m. to 8:30 p.m. Maryland Cooperative Extension will host this Orchard, Vineyard & Specialty Vegetable Twilight Tour & Ice Cream Social. Light refreshments will be served, including: "Old-fashioned" homemade peach ice cream! It's "old fashioned" ice cream because we will be using a 1929 Fair-Banks Morse antique gas engine to do the cranking.

Please call the Anne Arundel Extension Office to let us know that you are planning to come, or for answers to any pertinent questions at 410 222-6759.

The following research projects will be highlighted as part of the wagon tour:

1. Ethnic Vegetable Research
   Presenters: Tubene, Afantchao
2. Tree Fruit Research
   Peaches
   Presenters: Myers, Walsh, and Newell
   Beach Plums
   Presenters: Beale and Fiola
3. Vineyard Research
   Presenters: Reed, Fiola, Beale, and Welsh
4. Strip-Till & No-Till Vegetable Demonstration
   Presenters: Myers

Wheat Scab Still a Problem in 2004 By Bob Kratochvil Extension Specialist, Agronomy Crops

Reports of Fusarium Head Blight (FHB) or scab infections in wheat that are caused by the fungal pathogen, *Fusarium graminearum*, have surfaced once again. As I have traveled around part of the state I have seen varying levels of infection ranging from fields with no signs of scab to others that have a considerable level of infection. I don't believe that we are anywhere near the serious situation that confronted wheat producers last year.

The tell-tale symptoms of scab in wheat are any part or all of a head appearing bleached. These white heads are very conspicuous in a green field. Frequently only part of the head (often the upper half) is affected by FHB. These partly white and partly green heads are diagnostic. Additional indications of FHB infection are pink to salmon-orange spore masses of the fungus that can be found on the infected spikelet and glumes.
Many infected wheat kernels will be shriveled, lightweight, and a dull grayish or pinkish in color. These kernels are sometimes called “tombstones” because of their chalky, lifeless appearance. Other scab-infected kernels may be more normal in size, if infection occurred late in kernel development. These kernels, however, may have a dull appearance or a pink discoloration.

Generally a serious scab infection is accompanied by weather that is rainy during the flowering period. Last year, that was the case. This year, our weather has not been nearly as rainy but we have still had weather conditions that have been supportive of infection by the pathogen. For infection to occur, weather conditions must be favorable for spores of the pathogen to develop. The organism survives on corn and wheat residues as well as other grasses and produces its spores on crop residues that remain on the soil surface. Spores are released when crop residues retain sufficient moisture and the temperature is warm enough for spore development. As the amount of no-till planting increases (not only for wheat planted no-till into corn stalks but also the planting of double crop beans into wheat stubble), there is an increase in over-wintering sites for the inoculum improving the opportunity for an infection to occur when weather conditions are right.

The most critical time for infection to occur is at flowering and it requires that a sufficient number of spores land on the heads and the heads remain wet for a sufficient number of hours. However, the weather conditions 7 days prior to flowering and 10 days after flowering also have a large role in determining whether infection will occur. The ideal air temperature for the fungus to develop spores is between 60 F and 86 F during the 7 days prior to flowering. Much of the wheat in the state flowered between May 5 and May 20 this year. May has been a month that had temperatures considerably above normal including temperatures during the first couple weeks that easily were within the range for good spore formation. Since there was such a severe outbreak last year, there was also an abundance of inoculum waiting for the right conditions to prevail. Add to this the ever-increasing amount of no-till crop production that creates numerous overwintering sites for the inoculum.

Growers may experience fields with varying levels of disease incidence ranging from none to a considerable amount. This can be due to differences in variety susceptibility to the disease, proximity of the wheat plants to a source of fungal spores (i.e. corn residue), and the total amount of time wheat heads remained wet during flowering. Additionally, relative maturity of the variety and planting date can alter the flowering date of a field causing great differences in disease incidence levels. Thus, each field can have a different level of the disease.

Why is there such concern about scab? Of course, there is the obvious loss of yield and crop quality (i.e. test weight). In addition, a scab infection may be a precursor to the development of mycotoxins, the most notable being vomitoxin. Vomitoxin, also known as deoxynivalenol or DON, is a toxin produced by the fungal pathogen, Fusarium. This toxin is produced by Fusarium when sufficient moisture is available in the infected grain and the temperatures are favorable for the growth of the fungus. At high enough levels, vomitoxin causes severe digestive disorders in both humans and non-ruminants and in worst-case scenario can result in death. This is the reason why mills are very concerned about the level of vomitoxin present in wheat they purchase and if the level is too high (generally no more than 2 ppm) they will either reject the wheat or assess major deductions from their bid price. What should the farmer who has a wheat field infected with scab do? At this point in time it is too late to attempt a fungicide application that only may work if applied when the wheat is flowering. The only remaining option is to adjust the combine air speed at harvest so that the light-weight, tombstone kernels are removed along with the chaff. Keep in mind, however, that this will not remove all scab kernels, since some infections occur late in the development of the kernel, and those infected kernels may still be fairly plump and unable to be removed from the grain with increased air speed.

What’s Happened to My Alfalfa?

By Les Vough

Extension Forage Crops Specialist

What were good stands of alfalfa a year ago were often weak, uneven and weedy this spring. In some cases the stands all but disappeared. What happened? Well, it primarily goes back to the wet weather we had last spring, summer and fall, which was very damaging to alfalfa stands. Phytophthora root rot (Phytophthora megaasperma Drech.) has taken a heavy toll on both established and new stands. Phytophthora is water-mold (fungus) disease associated with poorly drained or heavily irrigated soils, or with periods of excessive rainfall. It is commonly known as “wet foot disease”, particularly since it is most prevalent on heavy, poorly drained soils - wherever a high water table exists. However, during extended periods of excessive rainfall (such as we frequently experienced last year) or under irrigation where the soil is saturated for 10 days or longer, phytophthora root rot can develop even in areas where drainage is normally adequate.

The first symptoms of the disease are stunting, leaf yellowing, and overall wilting of the plant. The fungus attacks seedlings as well as older plants. The disease is particularly devastating when it develops in a seedling stand, as occurred with many spring and late summer seedlings last year. I have seen parts of new seedlings, 6 weeks to 2 months old, almost completely destroyed by phytophthora. A distinctive symptom is the rotting and eventual collapse of the main tap root. Lateral roots and fine secondary or feeder roots may also be rotted. Root lesions are initially yellowish or yellowish-brown, later turning dark with yellowish margins, and then black. When the rot progresses to the crown, growth stops, the leaves turn yellow or reddish, and the plants die. If soil moisture is reduced and enough taproot remains, plants recover by initiating lateral roots. The root systems of these plants are shallow and forage production is severely reduced. While
these plants may continue to produce alfalfa under ideal conditions, such plants take on dormant appearances during periods of drought because their ability to make efficient use of fertilizer and available moisture, and therefore their ability to realize full production potential, is permanently reduced.

At this point in the growing season, most of the decisions have been made on whether or not to keep established stands. But I’m getting questions on what to do with late summer 2003 and spring 2004 seedings. What constitutes an adequate stand for new seedings? The following guide can be used for evaluating stands:

**Age of Stand** | **Plants/ft²**
---|---
Seeding year | 20-30
1st year after seeding | 12-20
2nd year after seeding | 8-12
3rd & subsequent years | 4-8

Stands counts can be made by making a 1-foot square out of wood, metal or plastic. Toss the square randomly in the field, then count and record the number of plants within the square. Do this in a number of places throughout the field. If the average is 20 to 30 plants per square foot for a late summer 2003 or spring 2004 seeding, the stand is adequate. If the average is less than 20 plants per square foot, consider interseeding more alfalfa in late August/early September.

Most of the affected new seedings that I have observed have variable stand densities, showing the variation in soil and drainage characteristics of the fields. In many cases enough of the field has a satisfactory stand that growers are hesitant to destroy what is there and start over again. Maybe only portions of the field need improvement. With stands a year old or less, no-till seeding into the existing stand immediately after cutting in late August/early September will usually be successful in improving the stand. Autotoxicity is less of a factor in stands a year old or younger than in stands 3, 4 or more years old. Late summer seeding into these weak stands generally works better than spring seeding because there is less competition from the existing plants in late summer/fall than in the spring – fewer stems/plant, usually less vigorous growth, and a shorter harvest interval, thus less competition.

A mature stand of alfalfa with 6-8 plants/sq. ft. has maximum yield potential. If less than 4-5 plants/sq. ft. are present, it is usually more economical to rotate out, take advantage of the available N from the alfalfa, and establish a new stand.

Another method of evaluating established alfalfa stands is to count the number of stems per square foot. Plant counts do not reflect the effect of plants that have few shoots and thus contribute little to yield. Stem counts may be a better indicator of yield potential than plant counts. This is best done when the alfalfa is 2 to 6 inches tall. As above, toss a 1-foot square at random throughout the field and count the number of stems (over 2 inches tall) within the square.

**Stand Density (Stems/ft²)** | **Yield Potential**
---|---
Over 55 | Stem density not limiting yield
40-55 | Some yield reduction
Under 40 | Stem density severely limiting yield
- replace stand

Stem counts can also be used to estimate the potential yield of an alfalfa stand. The University of Wisconsin reported that once stem number is determined, the following formula can be used to estimate yield potential of the stand:

**Yield (tons/acre)** = \((\text{Stems/ft}² \times 0.1) + 0.38\)**

For example, an alfalfa stand with 50 stems/sq. ft. would have a yield potential of 5.38 tons/acre. However, remember that soil factors, nutrient deficiency, insects, diseases and many other things can affect the actual yield obtained.

Many farmers and professionals alike are reluctant to take the time and make the effort to do counting. We can offer an easier alternative – a guide for making visual evaluations to estimate percent stand. This method compares random “readings” within the field to a series of pictures depicting various stand percentages. This 4-page leaflet contains pictures and instructions to guide you through determining percent alfalfa stand. If you are interested in using this method, request **Evaluating & Managing Established Alfalfa Stands: A Visual Guide** from Barbara Scheaffer at: bsheaffe@umd.edu or 301-405-1321.

### 2004 MDA Pesticide Container Recycling Collection

There are two relatively close sites for Anne Arundel and Prince George’s County farmers to dispose of their empty and rinsed pesticide jugs. Central and Southern Maryland farmers may drop-off their rinsed pesticide containers for recycling at the Perdue Farms located at 6272 Southern Maryland Boulevard on June 17, 2004; July 13, 2004; August 17, 2004; and September 21, 2004. The containers will be received from 9:00 a.m. to 3:00 p.m. for all dates listed.

Additional information on the required rinsing of the pesticide containers and the recycling program can be obtained by calling the MDA Pesticide Regulation Section Office at 410 841-5710.

### Southern Md. Farmers to Dispose of Unusable Pesticides in 2004

ANNAPOLIS, MD (June 10, 2004) – Growers in Anne Arundel, Calvert, Charles, Prince George’s and St. Mary’s counties will be able to dispose of unusable or unwanted agricultural pesticides this year under a program sponsored by the Maryland Department of Agriculture (MDA) in cooperation with the Maryland Department of the Environment, the University of Maryland Cooperative Extension and various agricultural organizations.

“This is an excellent opportunity for growers to safely dispose of old, banned, unwanted or unusable pesticides that may have been stored on their property for years,” said Maryland Secretary of Agriculture Lewis R. Riley. “This program is part of our commitment to remove a potential...
source of environmental contamination of the Chesapeake Bay and other valuable water resources.”

The Pesticide Disposal Program has been available to Maryland farmers and agricultural commodity producers since 1995 on an annual rotating basis. More than 100,000 pounds of unusable or unwanted pesticides have been collected from 282 farm sites throughout Maryland since the program was first initiated.

The 2004 pesticide disposal program in Anne Arundel, Calvert, Charles, Prince George's and St. Mary's counties is available free of charge to all farmers, nurserymen, greenhouse operators and Christmas tree growers. Registration forms to participate in the program are available from the Maryland Cooperative Extension office or from MDA. The deadline to submit registration forms to MDA is Nov. 30, 2004.

Once producers submit a registration form listing the types and quantities of pesticides to be disposed of, MDA inspectors visit the storage site to estimate the weight of the materials and to tag the pesticide containers for collection. A contract is awarded by MDA to a certified hazardous waste hauler who makes arrangements with the grower to pick-up the pesticides. The entire process from registration to pick-up takes approximately eight months. For additional information, contact Rob Hofstetter, Special Programs Coordinator for MDA's Pesticide Regulation Section at 410-841-5710.

Nutrient Management Update
By Krista Wilson
MCE Nutrient Management Advisor

Tissue Sampling for Small Fruit and Tree Fruit
Growing season greetings! Just a reminder to those who grow tree fruit or small fruit such as: grapes, blueberries, or brambles, tissue sampling season is approaching. In the past, MD Cooperative Extension (MCE) has used Penn State’s Agricultural Analytical Services Lab to analyze plant tissue samples for Nutrient Management Planning purposes. Now, Nutrient Management Plans (NMP) can use analyses from any of the labs we are currently using for soil and manure analysis. The price per tissue sample varies between $12 and $28. Please visit the Anne Arundel County MCE web site and scroll down to “Nutrient Management Bulletins” to view the comparisons of prices between tissue sampling labs and the types of analyses offered: www.agrn.umd.edu/annearundel/agbulletin.htm

It is best to tissue sample blueberry leaves during the 1st week of harvest. Fruit tree leaves should be sampled between July 15th and September 1st. Brambles need their leaves and petioles sampled between August 1st and August 20th, while grapes should have petioles sampled at full bloom. For assistance with tissue sampling and to obtain instructions on how to properly take a tissue sample (i.e. only one variety per sample), contact your county’s Nutrient Management Advisor. Like soil samples, tissue samples are an integral part of a NMP, and are required content. Tissue analyses are needed in order to give fertilizer recommendations for fruit crops.

MDA Plan Implementation Reviews
In the last newsletter, it was mentioned that MDA will begin their Plan Inspections sometime in October. At the web site mentioned above, there is a document entitled “Plan Implementation Review” that details what types of things the MDA Inspectors will be looking at. Please review and contact MDA (410-841-5959) if you have any questions. If you do not have internet access, you may contact your Nutrient Management Advisor to obtain the following items which are on our web site: www.agrn.umd.edu/annearundel/agbulletin.htm

G1. Alternative Soil Testing Labs
G2. Comparison of Manure Test Labs
G3. Comparison of Soil Test Labs
G4. Finding Account ID Numbers
G5. Plan Implementation Review
G6. Soil Sampling Procedures
G7. Soil Testing Lab Conversions
G8. Tissue Lab Comparisons

The “Comparison of Soil and Manure Testing Labs” has recently been updated with the latest analyses offered and the current prices. New information has been added on how to find the Property Tax Account I.D. numbers for the parcels of land your agricultural operation encompasses...
Maryland Farming Remains Strong, Poultry Dominates, Diversification Increases
MDA News Release
ANNAPOLIS, MD (June 3, 2004) - At 11 a.m. today, the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) released its final 2002 Census of Agriculture data. This is the most comprehensive information available describing the Nation's agriculture down to the county level in each state. In Maryland, poultry and grain remained steady while the nursery, floriculture and turf sectors grew significantly since the last census in 1997. Data are available for the first time on certified organic operations, crop insurance, internet usage, farm-related income such as agri-tourism, and a variety of demographic tabulations.

“These numbers indicate that agriculture remains very strong and an important part of Maryland’s economy despite the fact that the data were collected during one of the worst drought years in recent history,” said Agriculture Secretary Lewis R. Riley. “While poultry, dairy and the greenhouse and nursery industries are still the leading commodities, farms are diversifying - adapting to changing needs and markets.”

While the census also shows that the state has lost more than eight percent or 1000 of its farms and over five percent or 115,000 of its total land in farms, the numbers confirm that farmers are successfully adapting to market needs and transitioning into less traditional areas of agriculture. Nursery and floriculture crop area continues to increase, acreage planted to sod is up significantly, and new data on certified organic acreage indicates that this segment has established a strong presence in the state.

“We have collected these new data because of changes in agriculture and the need to quantify the nature of agriculture,” said Maryland Agricultural Statistics Service Director, Norman Bennett. “NASS attempts to contact every farming operation in the United States once every five years to update the Agricultural Census. The census data are important tools for farmers, agribusiness, land planners, and government decision-makers to track trends and plan for the future. Our agency will continue to implement new data series that are relevant to current information needs as we plan for the next census in 2007.”

Some interesting quick facts from this very large data set include:

* The broiler industry remained the largest sector, in terms of the market value of production ($583 million).
* Maryland lost over 6,000 acres of tobacco between 1997 and 2002.
* The number of hog farms was down over 43 percent from 1997.
* Land enrolled in government programs was up nearly 30,000 acres over the 5-year span.

Blue Mold Alert
And Other Downy Mildews
By Dave Conrad
Extension Tobacco Program Specialist
The North American Plant Disease Forecast Center at NCSU has been forecasting some blue mold spore trajectories, which passed over Maryland around the third week in June. These spore trajectories are likely to continue throughout the summer. Be on the lookout for reported blue mold outbreaks. The weather is perfect, and, the spores are probably in the vicinity. Dithane DF and Acrobat are our only preventative spray programs. See Tobacco Views and News No. 3, 2002, Table 6 for rates. Recommendations are also in EB237.

As you will see from the disease reports.... we have blue mold in several locations in central Kentucky. This is the first report in the U.S. in 2004. Indications from the newly discovered sites are that blue mold has been there for some time. Sporulation has been active, particularly so during the last week.

Thomas Keever, North American Plant Disease Forecast Center offers the following Alert:

I will need to perform some retroactive analysis work before I know for sure... but given the general weather patterns we have had in May, my suspicions are that trajectories out of central KY have been moving generally ENE more often than not. The growing areas most likely to have been affected by transport events from central KY include the eastern Ohio Valley (TN, KY, OH, WV), upper mid-Atlantic (MD, PA), and southern New England (CT, MA). Most of these areas have received normal to above normal rainfall during May. Areas adjacent to those just mentioned may have been affected, but at this time appear to be less likely candidates than those listed above. This would include southern Canada, the southern Appalachian Mountains, and the southern mid-Atlantic. Again.... some analysis work will need to be done before anything definitive can be stated.

We ask everyone to re-emphasize the importance of diligent scouting and prompt reporting to everyone concerned. Good fortune has been with us so far this disease season.... let's try to keep it that way!
USA Corn Rust Survey
By Deb Massey
NYSAES, Plant Pathologist

Our research group at the New York State Agricultural Experiment Station Plant Pathology Department is looking for people from as many states in the US as possible that would be able to send us leaves of corn infected with P. sorghi this summer.

We are developing a genetic (AFLP) fingerprinting marker system for Common Maize Rust, Puccinia sorghi. The goal of the research is to be able to differentiate different biotypes of rust, and to forecast when the uredinospores will be blowing into an area along wind trajectories. In order to develop the marker system, we need to obtain as diverse a sampling of rust as possible. We're looking for diversity in location, time, and the variety of corn that the rust is growing on.

Please work with your County Extension Educator or State Extension Specialists in order to collect and send samples of rust infected corn plants to the NYSAES Plant Pathology Department care of Deb Massey.

New Study Shows that Marylanders Want Locally-Grown Organic Food & Farmers Want to Reach this Profitable Organic Market
Chesapeake Fields News Release

CHESTERTOWN, MD – Maryland consumers want to buy locally-grown, organic food and many are willing to pay a premium price for it. At the same time, farmers are seeking new ways develop the market and reach these customers, according to a new study, Local and Organic: Bringing Maryland Organics from Farm to Table, by the Chesapeake Fields Institute (CFI).

John Hall, President of the Chesapeake Fields Institute, said “It is our hope that this report can provide farmers with the information necessary to thrive in today's competitive marketplace and keep agricultural profitable in Maryland.” The report contains information for agricultural producers and recommendations for state policymakers.

The report, which was funded through a grant from the U.S. Department of Agriculture Federal-State Marketing Improvement Program and administered by the Maryland Department of Agriculture, analyzes survey responses from 218 consumers and 184 certified organic or “organic-interested” producers in Maryland and evaluates three case studies for applicability in Maryland. Based on those surveys and studies, the CFI report recommends ways that can help this market reach its full potential including:

* Adequately fund a statewide labeling program to market Maryland-grown organic food to Maryland consumers.
* Encourage state institutions to develop contracts with state certified organic producers for their agricultural product needs through a pilot project in a public school, university, or other institutional venue.
* Educate non-organic farmers in Maryland about the certification fee rebate program and the help available for completing paperwork through workshops and mailings.
* Facilitate a series of meetings on specific Maryland

Food-Grade Soybean Opportunity
The mission of Chesapeake Fields Institute is to strengthen the profitability of traditional agricultural markets for family farms, while conserving the region's natural and cultural resources. Chesapeake Fields has found some international food grade soybean markets. They are searching for growers that may be interested in planting beans for this growing season. Their goal is to find markets that will benefit our growers. Food type beans require on farm storage. Smaller bins are preferred. Plus, the farmer has to be willing to clean out his planter and clean his combine, truck and grain handling system. If he/she is willing to do this, there are premiums available.

Option 1: Natto - The old SS 516, vary similar to Essex, a group 5 full season. They work with Montague farm in Tappahannock, Virginia. These beans are exported to Japan. They are offering farmers a $0.95 per bushel premium for the bean that grade. Beans will be processed from November through February at Greensboro Supply, Greensboro, Maryland. Last year the top yield for this variety was 59 bushels and the beans graded out over a 90% premium.

Option 2: Schillinger 82 - Chesapeake Fields is doing market research world wide to find niche food grade markets. They asked all local seed salesmen to submit non-GMO varieties. Bill Kenworthy tested these for protein and oil. They selected 8 to profile in a marketing brochure that they sent overseas. MDA and the Department of Business and Economic Development has assisted them with this project. The Schillinger 82 is a variety that is getting the most attention. It is a group 3.9 to 4 variety. Chesapeake Fields acquired all the seed available. The premium may not be quite as high as the Natto, but it may be $0.50 to $0.75
per bushel. This variety can be planted double crop. If you are interested, Chesapeake Fields has an information packet that explains the program. Please call 410-810-2081 for information.

**Wanted: A Few Good Farmers!**

**Try New Multi-Benefit Cover Crops and Learn New Research Skills**

By Ray Weil

Professor, Agronomy Soil Science

University of Maryland

As a Future Harvest board member and University of Maryland Professor of Soil Science, I am looking for a “few good farmers.” With grants from USDA – Sustainable Agriculture Research and Education program, The Maryland Center for Agroecology, and the Maryland Soybean Board, my graduate students, colleagues and I are embarking on a far-reaching new project that has the potential to help farmers improve their bottom line.

For several weeks in 2000, I visited southernmost Brazil, where the soils and climate are something like ours in the Mid-Atlantic. I visited farms that ranged from a 20-acre organic integrated fruit/vegetable/livestock farm, to a grain farm of several thousand acres. Everywhere I was impressed with the innovations being made to adopt no-till soil management to diverse farming situations – even small farms using animal traction—and with the great attention being paid to cover crops. At EMBRAPA (Brazil’s equivalent of the USDA) and several universities, researchers were also hard at work on cover crops. They rightly view no-till as the heart of sustainable farming and cover crops as the key to successful no-till. If you read Portuguese (and I don’t), Brazilian extension bulletins and websites carry a wealth of information on cover crop practices for no-till.

**Brassica cover crops show promise**

Have you noticed that many of our grain farms have plots with signs along the road marking different seed varieties or herbicides? Well, on the big grain farms in Brazil I saw similar plots comparing all kinds of cover crop species and combinations. Farmers were working with species I had never seen, testing them to see how they performed to provide specific benefits. The no-till farmers especially liked what they call “Nabo.” This is a kind of forage radish with a huge tap root. They said they used the radish to alleviate their soil compaction problems-- without having to resort to deep tillage that would set back their build-up of a no-till soil environment. Some call this “biological drilling” (see photo).

These experiences got me thinking-- we need to be more creative in our use of cover crops. We know that winter cover crops are one of our best tools for capturing nutrients before they leach away to pollute the Chesapeake Bay (and for controlling soil erosion on tilled soils that don’t have good residue cover). But few farmers feel they can afford the time and money to put in cover crops, unless the state pays most of the costs. And nearly all the acres that are under cover crops in this region are planted only with winter rye (and sometimes hairy vetch).

It turns out that there is a whole class of cover crops--the Brassica family-- that has the potential to do specific things that many farmers need. Bits of research from Brazil, Germany, California, Idaho and other places closer to home show that certain Brassica species alleviate soil compaction, suppress parasitic nematodes, control fungal diseases or reduce weed pressures— in addition to improving nutrient cycling, providing erosion control, conserving water and generally improving soil quality. But, there is very little information on how these species might perform as winter or summer covers in Mid-Atlantic agriculture, or on how farmers can obtain several of the aforementioned benefits from the same cover crop.

This is where our new project comes in. Initially we will be working with rapeseed (a.k.a. canola --- especially cultivar ‘Dwarf Essex’), a mustard blend, oilseed radish, and forage radish. We also will investigate how these Brassicas grow in combination with other cover crops like cereal rye and crimson clover that are especially good at providing mulch or nitrogen. The bottom-line question is: can these new cover crops more than pay for themselves in the short term, with increased yields and save money not spent on deep tillage, soil fumigants and pest and weed control?

Soon after returning from Brazil, I talked to several farmers in our area who are trying out new practices and materials. They didn’t really know if these new practices were better than what they were doing before – or if they were worth the cost. Often, I’d hear statements like “I tried it and it worked great – yields were up by 20% from before.” Well, I could sell almost any snake oil if all I needed to do was compare this year’s yield with last year’s (or yields in the neighbor’s field to those on your farm).

We need to know which variety will resist pests and diseases without the use of agrichemicals. Will a forage radish cover crop really improve compacted, nematode-infested soil so crops will yield more in dry years? Reliable information can improve productivity and the bottom line. Let’s find out if a farmer’s hunch is correct with objective research. With budget cuts shrinking university and extension efforts on practical farming research, it may be time for farmers to tool up to do some of their own research on their own farm. Therefore, part of our project will use the new brassica cover crops as a vehicle to empower farmers to design and implement trials to answer their own research questions. We need you!

**Farms needed for 2004 research plots**

If you are interested in trying one or more cover crops on your farm in simple, reliable trials, call or email us. Since most of these cover crops need to be planted by late August or early September, it’s too late to put in plots this fall. But, it’s not too early to start thinking about and talking to us about plots for late summer/fall of 2004. We can help you determine what research questions are relevant to your farm, provide the seed, help lay out the plots, and help determine yields and measure soil properties. You can expect to have 4 to 6 plots of each treatment (these can be combine-width strips across the field or as small as 30-foot segments of a strawberry bed). We’ll work with you so your research experiment will
answer a question of importance to your farming operation. You can reach me at 301-927-7442 or rw17@umail.umd.edu. Or, see our website for details and photos: http://www.nrsl.umd.edu/research/NRSLResearchProjectInfo.cfm?ID=91

**Vegetable Update**

**Vegetable Crop Insects** - by Joanne Whalen, Extension IPM Specialist, University of Delaware: jwhalen@udel.edu

**Cucumbers**

Continue to scout for cucumber beetles and aphids. Fresh market cucumbers are susceptible to bacterial wilt, so treatments should be applied before beetles feed extensively on cotyledons and first true leaves. Pickling cucumbers have more tolerance to wilt, so a treatment should be applied if you find 2 or more beetles per plant and significant damage can be found on the cotyledons. A treatment should be applied for aphids if 10 to 20 percent of the plants are infested with aphids with 5 or more aphids per leaf. Fulfill®, Thionex® or Lannate® will provide aphid control. Be sure to watch for bees foraging in the area and avoid insecticide applications on blooming crops. A pyrethroid, Lannate®, Sevin® or Thionex® are labeled for cucumber beetle control in cucumbers.

**Melons**

Continue to scout all melons for aphids, cucumber beetles, and spider mites. If spider mite populations are high at the time of treatment, 2 sprays spaced 5 days apart may be needed. The threshold for mites is 20-30 percent infested crowns with 1-2 mites per leaf. Acramite®, Capture®, Danitol®, Agri-Mek® or Kelthane® will provide control, but should be rotated to avoid the development of resistance. The treatment threshold for aphids is 20 percent infested plants with at least 5 aphids per leaf. Continue to watch fields carefully for cucumber beetles. Be sure to look under the plastic where beetles can often hide until disturbed. Be sure to watch for bees foraging in the area and avoid insecticide applications on blooming crops.

**Peppers**

In areas where corn borer trap catches are above 2 per night and pepper fruit is ½ inch in size or larger, fields should be sprayed on a 7-10 day schedule for corn borer control. If fruit is not present, larvae hatching from egg masses will feed on the leaves then move into the petioles and stems. For these fields, a pyrethroid application should be considered especially if egg masses are found and trap catches are above 10 per night in your area.

**Correction to the Vegetable Recommendations for Acephate (Orthene) on Peppers.**

If you read the current Orthene® 75S label (as well as all current acephate labels), European corn borer control (ECB) is only listed under bell peppers and the rate is 1-1.33 lb per acre of Orthene® 75S (not 0.67-1.33 as listed in the book). After talking to Valent, it appears that ECB was mistakenly dropped from the non-bell pepper label. The current label states aphid control only at a rate of 0.67 lb/acre. (Orthene® 75S). Another difference is the maximum amount allowed on each pepper type (bell versus non-bell). Regardless of the formulation (Orthene® 97, Orthene® 75S or generic acephate), the maximum amount allowed for bell peppers is 2 lb ai/season. On non-bell peppers the maximum amount is 1 lb ai/season. Valent Corporation (manufacturer of Orthene® 97) has agreed to submit a 2ee label to EPA for DE, MD, NJ, PA, and VA to add corn borer back on the Orthene® 97 label for non-bell peppers at a rate of ¼ - 1 lb per acre. With this label change, you will be limited to one Orthene® (acephate) application for corn borer control on non-bell peppers. We will let you know when we receive the 2ee label.

**Potatoes**

Continue to scout fields on a weekly basis for Colorado potato beetle (CPB) adults and larvae. The treatment threshold for adults is 25 beetles per 50 plants and defoliation has reached the 10 percent level. The larval threshold is 4 small larvae per plant or 1.5 large larvae per plant. The threshold for each should be reduced by 1/3 to 1/2 if all stages are present. Avaunt® + PBO, Actara®, Cryolite®, Spintor® or Provado® will provide control. Economic levels of potato leafhopper adults and nymphs can be found in many fields. As a general guideline, controls should be applied if you find ½ to one adult per sweep and/or one nymph per every 10 leaves. Dimethoate®, a pyrethroid, Actara® or Provado® will provide control.

**Snap Beans**

All fields should be scouted for leafhopper and thrips activity, especially seedling stage beans. The thrips threshold is 5-6 per leaflet and the leafhopper threshold is 5 per sweep. If both insects are present, the threshold for each should be reduced by 1/3. Dimethoate®, Lannate®, Asana®, Capture®, or Warrior® will provide control of both insect pests. Once corn borer catches reach 2 per night, fresh market and processing snap beans in the bud to pin stages should be sprayed for corn borer. Acephate should be used at the bud and pin stages on processing beans. Once pins are present on fresh market snap beans and trap catches are above 2 per night, a 7-10 day schedule should be maintained for corn borer control. Lannate®, Asana®, Capture®, or Warrior® or Mustang® are labeled. Acephate has a 14-day wait until harvest. Be sure to check our vegetable update website (http://www.udel.edu/IPM/traps/latestblt.html) for the most recent moth catches in your area.

**Sweet Corn**

All silking sweet corn should be sprayed on a 4-5 day schedule.

**Vegetable Crop Diseases** - Bob Mulrooney, Extension Plant Pathologist, University of Delaware, bobmul@udel.edu

**Belly Rot on Pickling Cucumbers**

This fungus disease of the fruit is an often frustrating disease to prevent. The causal fungus *Rhizoctonia solani* is very common and can remain viable in the soil for many years. It has a very large host range and rotations are not very effective in control of Rhizoctonia. The optimum temperature for infection is 81°F and high humidity under dense foliage also contributes to favorable conditions for fruit infection. Rotations away from cucurbits can help as well as deep plowing before planting to bury the fungus.
The most favorable conditions for belly rot are usually in July and early August following an early crop of pickles. Unfortunately fungicide control has always been inconsistent. The only labeled control is applications of Quadris® or Amistar® at the four leaf stage and again at flop or vine tip-over. This application timing requires another application in addition to any fungicide sprays for Phytophthora fruit rot control. (See last weeks newsletter for info on Phytophthora fruit rot control.)

**Hollow Heart of Watermelons** - Ed Kee, Extension Vegetable Crops Specialist University of Delaware: [kee@udel.edu](mailto:kee@udel.edu)

Watermelons have grown a lot in the past 10 days, growers are now beginning fungicide sprays, scouting for insects and mites, and applying nitrogen. While there is no special reason to anticipate any excess hollow heart problem, it is a good time to discuss what can cause this physiological problem. Chris Wein, of Cornell writes, “This disorder is characterized by the separation of the inner parts of the fruit into distinct segments, leaving hollow areas at harvest maturity. Hollow heart occurs more often in the first-formed fruit on the plant, as a result of excess nitrogen fertilization and delayed harvests. The disorder is more prevalent under conditions of rapid fruit growth rate, when the rind is expanding more rapidly than the inner regions of the fruit. Ways of avoiding the condition include selection of less susceptible cultivars, and using cultural practices that moderate fruit growth rate and final fruit size. These include adequate plant populations, moderate levels of nitrogen, and prompt harvests.”

**Sandea Can Carryover to Some Vegetables** - Mark VanGessel, Extension Weed Specialist University of Delaware: [mjv@udel.edu](mailto:mjv@udel.edu)

Sandea® is labeled for use in a number of vegetable and melon crops. However, it is not safe for all vegetables and this includes vegetables planted in rotation with crops treated with Sandea® (halosulfuron). Last year a few fields were planted with pickles, treated with Sandea, and rotated to spinach. The spinach crop was injured due to halosulfuron carryover. So check your herbicide labels to be sure there are no problems with herbicide carryover.

**Field Crop Update**

**Field Crop Insects** - Joanne Whalen, Extension IPM Specialist, University of Delaware: [jwhalen@udel.edu](mailto:jwhalen@udel.edu)

**Alfalfa**

Continue to sample all fields on a weekly basis for leafhopper adults and nymphs. Once fields are yellow, stand and yield loss has already occurred. We are starting to see a significant increase in nymphs which often cause damage very quickly. The treatment thresholds are 20 per 100 sweeps on alfalfa 3 inches or less in height, 50 per 100 sweeps in 4-6 inch tall alfalfa and 100 per 100 sweeps in 7-11 inch tall alfalfa. Baythroid®, Dimethoate®, Mustang® or Warrior® will provide effective control. Early cutting is also a control option, but be sure to check fields within a week of cutting for leafhoppers.

**Field Corn**

Continue to sample all fields on a weekly basis for leafhopper adults and nymphs. Once fields are yellow, stand and yield loss has already occurred. We are starting to see a significant increase in nymphs which often cause damage very quickly. The treatment thresholds are 20 per 100 sweeps on alfalfa 3 inches or less in height, 50 per 100 sweeps in 4-6 inch tall alfalfa and 100 per 100 sweeps in 7-11 inch tall alfalfa. Baythroid®, Dimethoate®, Mustang® or Warrior® will provide effective control. Early cutting is also a control option, but be sure to check fields within a week of cutting for leafhoppers.

**Careful of Surfactant Use In This Weather** - Mark VanGessel, Extension Weed Specialist, University of Delaware: [mjv@udel.edu](mailto:mjv@udel.edu)

Due to overcast skies and ample moisture, plants have very thin cuticles which may result in increased injury with...
postemergence herbicides. Nitrogen additives are most likely to cause crop injury with this weather. Also, consider using non-ionic surfactant rather than crop oils to reduce the risk of injury. University of Delaware data supports use of non-ionic surfactants over crop oil concentrates because it provides similar levels of weed control as crop oils with less risk of injury. This has been true in weather patterns such as we are experiencing as well as in dry weather.

**Do Not Assume a Second Application of Glyphosate is Always the Answer** - Mark VanGessel, Extension Weed Specialist, University of Delaware: mjv@udel.edu

In many Roundup Ready soybean fields, if the level of weed control is less than acceptable, the automatic response is a second application of glyphosate. A second glyphosate application will certainly help with many species that glyphosate provides only marginal to fair control (mornings Glory, smartweed, velvetleaf, etc). However, where control was poor for only one species (all other species were controlled) and there is not an apparent reason, you may want to consider an alternative herbicide rather than using more glyphosate. University of Delaware Weed Science as well as reports from Mid-West Universities, indicate populations of lambsquarters that are more difficult to control with glyphosate than other lambsquarters populations. Situations where only one species experience less than expected control should cause you to think about alternatives to additional glyphosate applications.

**Cultivation and Postemergence Herbicide Treatment**: Mark VanGessel, Extension Weed Specialist, University of Delaware: mjv@udel.edu

Questions have come in about whether to cultivate first or spray first for weed control. Keep a few things in mind. Weeds are easier to control when they are small, but consider which option is going to be more effective when weeds get larger. Cultivation will control the weeds between the rows but not in the row. Those weeds in the row are the ones you need to base your decision on whether to spray first. More often than not, it is better to spray first then cultivate. Also, weeds not completely killed with cultivation are more difficult to control with herbicides. This assumes that the herbicide is the right herbicide for the weed(s) in your field. The weeds that emerge after cultivation are going to be much smaller and have a less impact on yield (if any impact at all). Setting your cultivator so it runs only 1 to 2 inches deep will slice through the weeds and not disrupt the herbicide layer from your preemergence herbicides. This in turn will limit the number of weeds that will emerge due to cultivation. It is generally recommended to wait a minimum of 5 to 7 days between herbicide treatment and cultivation.

**Agricultural Handbook 66**

_The Commercial Storage of Fruits and Vegetables, and Florists and Nursery Stocks_  
_By The Grower- February 2003_

Scientists from the U.S. Department of Agriculture Research Service have posted post-harvest storage information on the Website: [http://www.ba.ars.usda.gov/hb66/](http://www.ba.ars.usda.gov/hb66/)

The document is an electronic review draft called _The Commercial Storage of Fruits and Vegetables, and Florists and Nursery Stocks_ (AH 66.) This document, a review of the forthcoming publication, includes information on quality characteristics, maturity indices, grading, pre-cooling, retail display, ethylene production and sensitivity, respiration rates, food safety and post-harvest pathology.

**Tips to Maximize Crop Insurance Benefits**  
By Gene Gantz RMA/USDA

**Initial planting Deadlines:**

<table>
<thead>
<tr>
<th>Crops</th>
<th>Planting Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field corn</td>
<td>6/10* (5/31* Eastern)</td>
</tr>
<tr>
<td>Fresh market sweet corn</td>
<td>6/30</td>
</tr>
<tr>
<td>Grain sorghum</td>
<td>6/20*</td>
</tr>
<tr>
<td>Processing beans</td>
<td>7/10**</td>
</tr>
<tr>
<td>Soybeans</td>
<td>7/05* (6/20* Western)</td>
</tr>
<tr>
<td>Processing sweet corn</td>
<td>6/30</td>
</tr>
<tr>
<td>Processing tomatoes</td>
<td>6/15</td>
</tr>
<tr>
<td>Tobacco</td>
<td>6/25</td>
</tr>
</tbody>
</table>

**Multiple dates** are applicable. *Late planting protection:* If weather delayed your planting beyond the above planting deadline, report the acreage for crop insurance separately by date planting was completed for each field, for maximum coverage, as the coverage declines 1% per day for each day that planting was delayed after these dates. **Replanting protection applies** to many crops. Check with your agent for details before you destroy the evidence of the initially planted acreage. **Acreage reporting deadline** for most above crops is 7/15.

**Other Issues:**

Notify your crop insurance agent immediately and ask what you are required to do if:

- You add additional land to your operation on which you will be growing insured crops in 2004,
- You have failed newly seeded acreage and need to replant to the same crop (you may be eligible for a replant payment),
- You have failed newly seeded acreage and intend to replant to different crop (new second crop provisions may apply),
- You are prevented from planting an insured crop by the final planting date (you may be eligible for a prevented planting payment). Note: Some prevented planting rules have changed for 2004. If faced with prevented planting, double check the new rules before you take actions.
- You suffer damage to a growing crop.

**Acreage Reporting Deadline:**

Producers are required to file acreage reports with both their crop insurance agent (by 7/15 for most spring crops) and at the county FSA office. If there are differences between the two reports provide a written explanation because the law requires USDA to do a computerized comparison of the reports. Be careful to assure that the reports are accurate including planted and prevented planting acreage for each farm because this will set your
amount of protection for 2004 (most surprises at the time of loss claims result from reporting errors).

Retain a copy the signed acreage. Summary of Protection or Schedule of Insurance will arrive in 4 to 8 weeks. Compare the information with your filed acreage report to assure that the information agrees. Notify your insurance agent immediately of any discrepancies.

**Damaged Small Grain:** Damp rainy weather in May caused concern about disease/toxin concerns in small grain. About 1,100 crop insurance policies are in effect in MD and provide protection against poor grain quality. If you determine that your insured grain may have quality damage, contact your crop insurance agent before you begin to harvest and ask to talk to a crop loss adjuster to determine how to proceed to obtain maximum policy benefits. If your insured grain has poor quality, the insurance company may require, two tests, a quality determination by a Federal Grain Inspection Service (FGIS) laboratory of both a grain grade and a toxin content (i.e. vomitoxin PPM). Be sure to request both tests in communications with FGIS if you have vomitoxin (last year some affected producers got only one of the tests and forfeited the loss payment).

Reporting requirements if a loss is anticipated: The insurance policy requires that written notice be given to your crop insurance agent (by crop by farm):
- Within 72 hours of discovery of damage or loss,
- 15 days before harvest begins, and
- Within 15 days after harvesting is completed but not later than 7/31.

Maryland General Forestry Correspondence Course

Registrations are now being accepted for the fall semester of the **General Forestry Correspondence Course** which runs from September 1 - December 15, 2004. Work from the comfort of your home, using your own woodland, a friend's or a public forest while learning the basics of forestry, forest ecology, and forest health in this non-credit course. Find out how to protect your trees from insects, diseases and fire. Step-by-step procedures walk you through a forest inventory and stand analysis. Explore the details of the forestry business, including tax nuances and the sale and harvest of forest products. Ultimately, the course exercises help you develop a management plan for your forest.

As part of the $150 registration fee, students will receive a General Forestry Correspondence Course text notebook, separate appendices packed with resources and additional supplemental readings. A certificate of completion is awarded when all assignments are completed.

For more information contact Nancy Stewart at the Wye Research and Education Center, University of Maryland Cooperative Extension, P.O. Box 169, Queenstown, MD 21658 (phone 410-827-8056, ext. 140; email nstewar1@umd.edu). Or visit the website at [www.naturalresources.umd.edu](http://www.naturalresources.umd.edu).

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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](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](http://www.agnr.umd.edu/AnneArundel/agbulletin.htm)

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**R. David Myers**

Extension Educator

Agriculture and Natural Resources

Anne Arundel & Prince George's Counties

Fruits and Vegetables

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