

The Grain Store

2013-2014 FUNDING REPORT



Message from Paul Spies, President Maryland Grain Producers Utilization Board

& *Harvest*, which has received great public accolade and viewer-ship in its first season.

The Checkoff program is completely funded and operated by agricultural industry stakeholders, which allows the development of our own goals that are Maryland specific. This is particularly important in funding research that is based on our local soils and weather.

Nutrient research continues to be a high priority. Understanding the movement of nutrients through soil, analyzing what nutrients are used by row crops, assessing the benefits of various cover crop options, and timing of application of nutrients are all projects undertaken this past year so that farmers may better manage their fields for maximizing yield.

Farmers experience significant crop losses from disease and pests annually. Research is being conducted to develop management techniques to prevent disease and find effective methods for controlling pests such as stink bugs and slugs which have become more prevalent in the past several years.

Within the parameters of growing for a healthy environment, the board also recognized the need that with a growing world population, attention must be given to increasing yields to ensure that sufficient quantities will be available. Funding has been directed to investigating seed varieties and management techniques that will increase yields while still maintaining a high level of protection of land and water resources.

I would like to commend and congratulate three of our local growers who have accepted leadership positions on national boards, giving Maryland exposure on a national and international stage. Chip Bowling is the incoming president of the National Corn Growers Association. Jason Scott is currently secretary-treasurer of U.S. Wheat Associates and will continue on to vice-president and president over the next two years. Chip Councill has put his name forward and is running unopposed for secretary-treasurer of US Grains Council a position that will lead him to president in two years.

These leadership roles are a major commitment and these grain farmers put a lot of time to support us. Maryland is an active partner with several of the national grain boards, where resources are pooled to address issues of a national nature, such as increasing trade through fair policies with existing clients, opening new markets abroad, and passage of the Farm Bill.

I encourage you to join us at the Maryland Commodity Classic on Thursday, July 24, and speak to the individuals who are conducting the projects that have been funded this year. Joanne Clendining, the exuberant Maryland Farm and Harvest Host, is our emcee for the day and nationally recognized talent Trent Loos is our keynote speaker.

Feel free to contact any of the board members or me to discuss your thoughts on checkoff projects. Your involvement is welcomed as a board or committee member, or a representative to a national board. The checkoff program is your investment in your future, and we welcome your input.

The Maryland Grain Checkoff Program provides the vehicle to pool industry resources and invest in education, promotion and research to make a difference over the long term. With strong support from growers, the Maryland Grain Producers Utilization Board has used these investments thoughtfully and judiciously on projects described in this report that protect and grow markets for your grain.

The Board is making innovative investments in educating our consumers about who we are and what we do to raise their food, fiber, fuel and energy. Putting a face on the farmer builds the connection in consumer confidence to know that we grow our products in a safe and environmentally-conscience manner. In 2013, our education programs reached over a million citizens in Maryland. Our largest project is the new Maryland Public Television series, *Maryland Farm*

In the first 13 week series of the Maryland Farm & Harvest Program, the grain industry has been well represented with these featured stories:

Olin, Alan and Chris Davis, members of a 5th-generation Kent County farm family, raise chicken, and grow grain and radishes to help reduce runoff into the Chesapeake Bay; A new generation of farmers, including Trey and Herman Hill of Harborview Farms, who work to save the Bay with sustainable growing practices; Poolesville farmer Jamie Jamison works to maximize yield and minimize risk during the annual corn harvest; Cutting-edge farm technologies save time and money for farmers like Jonathan Quinn who have adopted "precision agriculture."; Blessing of the Combines - David Schockley and Libby and Becky Payne talk about this annual festival honoring the local farmers; Tenth generation farmer Chip Councill offers a wide variety of attractions for agritourists on his Talbot County farm; Frederick County farmers David, Joe

and Linda Burrier talk about grain production and growing high-end alfalfa for race horses; Frederick area dairy and grain farmer Greg Clabaugh grows barley for beer and teams up with brewmaster Tom Flores to form Maryland's original malthouse and farm brewery; Modern technology allows farmers like Kenton Bender and Randy and Tyler Swann to continue their harvesting work even after nightfall; Mt. Airy farmers Tom Barse and Dell Hayes grow hops for beer; Crop duster pilot Jeff Chorman helps keep the Bay clean by dropping cover crop seeds that prevent runoff from polluting waterways; Garrett County farmers Brent and Gary Fratz face unique farming challenges due to their high altitude and distinct soil type; Then & Now Stories showcased: History of shipping Maryland grain; Soil conservation; and Silos and silage.

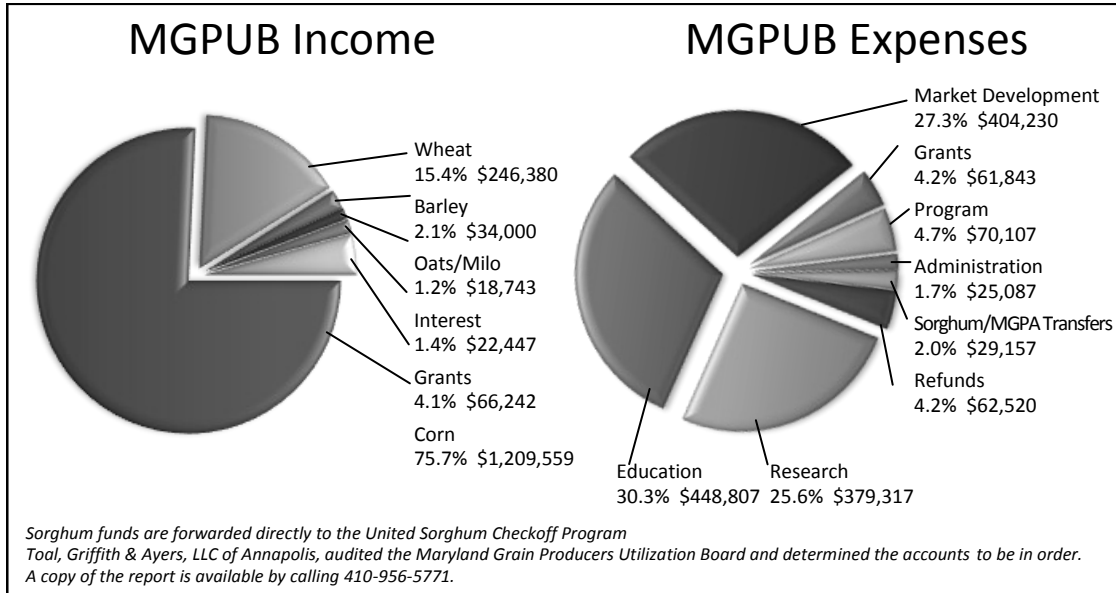
MARYLAND FARM & HARVEST
Second Series Starts
November 11, 2014

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Farmers Investing in their Future



The hypothesis of this research was that grain feeding would improve goat carcass quality and value, which would increase the demand for Maryland-grown grain. The hypothesis proved correct. The increased value (\$66/head) of the pen-fed goats, due to superior growth and live grade, would more than have compensated for the cost of purchased feed (\$35/head). Pen-feeding also eliminated internal parasitism, which is a major obstacle to raising goats on pasture. Preliminary results of the study are available on the website.

Grants: 2013-\$9,500; 2014-\$11,684

PREDICTION OF SUBSURFACE PHOSPHOROUS LOSS BY SITE AND SOIL CHARACTERISTICS

JOSHUA MCGRATH
University of Maryland, Plant Science & Landscape Architecture

The goal of this project is to improve the Phosphorus Management Tool (PMT) by evaluating soil characteristics that might contribute to subsurface phosphorus transport in ditch drained fields. This project was not completed and a no-cost extension was requested to complete the evaluation of soil samples in the laboratory. Instead, the graduate student on this project was asked to reprioritize and focus on evaluating the PMT adopted into policy by MDA early in the year relative to validated field scale phosphorus transport. This was considered the highest priority considering the rapid rate at which the state of Maryland was moving forward with implementation of the University's proposed PMT.

Although the currently adopted PMT is based on sound science and is an advancement over the existing 2005 Phosphorus Site Index; there is a definite need to assess the level of uncertainty surrounding the new calculations. These evaluations are near complete and results indicate that substantial changes need to be made to PMT calculations in order to increase their accuracy and precision.

Grant: 2013-\$20,690

DOE HARVEST CHALLENGE INCENTIVE PROGRAM

MATT WILSON
*Farmers and Hunters Feeding the Hungry
www.fhfh.org*

Hunters are invited to complete a Doe Harvest Challenge entry card for every doe donated to Farmers and Hunters Feeding the Hungry (FHFH) during the season. By participating, hunters ease crop damage losses for farmers, help feed the hungry, and get a chance to win one of over 60 Bass Pro Shops gift cards awarded by random drawing after the season.

One deer can feed over 200 people. Last season, generous hunters of Maryland donated 3,105 deer to FHFH providing over 600,000 meals of venison to food banks, soup kitchens, and churches across the state. A successful Doe Harvest Challenge increases those donation numbers and helps feed thousands of individuals and families across Maryland struggling with hunger.

The 2013 Doe Harvest Challenge was sponsored by the Maryland Grain Producers Utilization Board, Maryland Soybean Board, Maryland Farm Bureau, and Bass Pro Shops.

Grants: 2013-\$60,000; 2014-\$60,000

OYSTER RECOVERY PARTNERSHIP

STEPHAN ABEL
*Oyster Recovery Partnership
www.oysterrecovery.org*

The Oyster Recycling Alliance continued to grow over the last year and now includes nearly 225 restaurants, hotels, caterers and seafood distributors in the Oyster Recovery's network. Shell collected through this recycling program are aged, cleaned and then reused as the host shell for baby oysters that are replanted in the Bay.

This year, the Oyster Recovery Partnership planted 862 million spat on shell on 128 acres on nine different oyster reefs in the Harris Creek oyster sanctuary. Harris Creek is the site of the largest oyster restoration effort ever conducted in the Chesapeake Bay. This grant directly supported staff, supplies and other direct costs associated with the production of the spat on shell at the field facility on the campus of the University of Maryland Horn Point Hatchery in Cambridge. The funds also provided the planting fees and support associated with the September planting of 15 million spat on shell on Upper Harris Creek oyster reef in Harris Creek.

Grants: 2013-\$15,000; 2014-\$15,000

USING GRAIN TO IMPROVE GOAT CARCASS QUALITY AND VALUE

SUSAN SCHOENIAN
*University of Maryland Extension
www.sheepandgoat.com*

Thirty buck kids were used in a study to compare the carcass quality and value of pen-fed versus pasture-fed meat goats. The 15 pen-fed goats were limit-fed a whole barley-based diet once per day. They also had ad libitum access to a mixed grass-legume hay. The 15 pasture-fed goats grazed alongside the goats in the Western Maryland Pasture-Based Meat Goat Performance Test. Data and samples were collected every two weeks.

After a 13-day adjustment period and 84-day feeding period, the goats were harvested to collect carcass data. The pen-fed goats had a significantly higher average daily gain (0.31 lbs. versus 0.064 lbs.) than the pasture goats. The pen-fed goats also had lower worm burdens, as evidenced by lower average fecal egg counts (291 versus 1230), lower average FAMACHA© scores (1.8 versus 2.7), and fewer anthelmintic treatments (0 versus 27). The pen-fed goats produced superior carcasses, yielding almost five percent more boneless, fat-free meat.

MONITORING FIELD LEVEL GROUNDWATER QUALITY IN THE UPPER CHESTER SHOWCASE WATERSHED

JOHN CLUNE
U.S. Geological Survey
www.usgs.gov

The USDA Natural Resource Conservation Service chose the Upper Chester watershed as a showcase for increased conservation efforts. The U.S. Geological Survey (USGS), as part of the Presidential Executive Order for Chesapeake Bay Protection/Restoration, is helping assess potential changes in water quality at the small watershed scale. USGS is funding and performing the main components of routine and synoptic sampling of base flow surface waters, representing groundwater conditions, throughout the watershed and installing continuous data sensors for monitoring discharge and water quality, including nitrate.

This grant funds the remaining component to assess groundwater quality on a smaller field scale, beneath a representative agricultural field where new or a significant increase in conservation practices have been implemented. The monitoring approach includes designing and constructing a network of shallow and deep monitoring wells for periodic sample collection and sampling of shallow groundwater at several locations beneath the field using temporary well points installed using a Geoprobe.

Chemical analyses includes nutrients, major ions, field parameters and nitrogen isotopes. Water samples are also collected for dating to help understand the residence time of local groundwater and to put any documented changes in water quality in the context of the time period necessary to see changes in streamwater quality.

It is anticipated that documenting the water quality response of conservation practices in the Upper Chester will be a three to five year effort.

Grants: 2013-\$64,839; 2014-\$39,875

CORN NITROGEN RATE STUDY

ROBERT KRATOCHVIL
*University of Maryland, Plant
Science & Landscape Architecture*

During a previous four-year study assessing corn response to nitrogen, it was recognized that the current “yield goal” method (1 lb. nitrogen/bushel yield goal) may require modification. Based upon the nitrogen rate models defined by that study, it was observed that 1.1 to 1.2 lb. nitrogen/bushel (N/bu) yield goal likely does a better job of estimating how much nitrogen is required to produce optimum yield. One shortcoming of that research was whether the rate determination will adhere to the adjusted yield goal of 1.1-1.2 lb. nitrogen on a broader range of soil types. Therefore, the first objective of this project was to evaluate corn yield response to nitrogen rates on more Maryland soil types. The second objective was to use a fertilizer source of nitrogen with a labeled isotope of nitrogen (¹⁵N) to do extensive measurements on corn nitrogen utilization and fate of nitrogen in the soil.

Two hybrids have been planted at six University research farms on nine soil types (total of 12 sites in two years). The range of nitrogen rates has been 0–275 lb. N/acre. The amount of pre-plant fertilizer supplied was limited to 25 lb. N/acre for all treatments with the exception of the control at 0 lb. The remainder of each nitrogen rate has been supplied via an injected sidedress operation. The ¹⁵N study was planted in Beltsville (2012) and Upper Marlboro (2013), and is a joint undertaking with Dr. Jack Meisinger, USDA-BARC.

Two distinct growing seasons were experienced which have provided an opportunity to evaluate the corn response under nearly diametrically opposite weather. The first, 2012, was highlighted by a drought that affected the corn performance at all locations except in Western Maryland. The second in 2013, saw good to excellent growing conditions that resulted in good crop production.

Nutrient Research

This study has determined that the use of the “1 lb. N/bu yield” goal method for determining nitrogen rate underestimates the amount of nitrogen needed for optimized profit. This outcome has been similar over two years that had nearly opposite weather and growing conditions.

To date, this research has determined that the nitrogen rate should be calculated using 1.1 - 1.2 lb. N/bu yield goal. This adjustment is suggested for farmers who have not yet adopted variable rate technology to supply corn nitrogen fertilizer.

Grant: 2013 - \$10,000

INTEGRATING SOIL SENSING WITH VERIS, YIELD MAPPING AND GREENSEEKER TECHNOLOGIES TO IMPROVE NITROGEN MANAGEMENT

JOSHUA MCGRATH
*University of Maryland, Plant
Science & Landscape Architecture*

Research was focused on improving crop production in Maryland through better nitrogen management and recommendations. Evaluation was conducted on long term yield maps, soil maps made using “on the go” Veris sensing technology, and GreenSeeker. This work has been very successful and great potential is seen for the integration of these technologies in corn production for Maryland farmers.

Outside funding to support a portion of this work was not available and therefore funds remain from 2013. A no-cost extension was extended to spend the remainder of 2013 funds in 2014 to continue work.

Grant: 2013-\$25,237

EVALUATING SOIL PHOSPHOROUS TRENDS OVER TIME

JOSHUA MCGRATH
*University of Maryland, Plant
Science & Landscape Architecture*

To evaluate soil phosphorus trends with time, research on 50 fields that were studied in 1994 were evaluated as to how mandatory nutrient management planning impacted soil phosphorus during the intervening time period. Review showed that, generally, nutrient management policy is having the intended impact. If this subset is representative of Maryland farmers in general, they are following currently recommended practices. Soils from these sites continue to be evaluated to further understand how nutrient management planning impacts phosphorus concentrations and the potential for offsite transport or crop intake.

Along with this study, it was also relevant to evaluate what happens in soils after manure application ceases. Between 1994 and 1997, five treatments were applied in replicate at three University of Maryland research farms (no manure and four rates of phosphorus). It was found that soil phosphorus decreases very slowly with time. However, looking at phosphorus forms, it appears that Mehlich 3 soil test (the standard agronomic soil test) is not the best method to predict potential environmental risk. Site and management factors have a distinct impact on soil phosphorus forms that are most likely to be lost to surface water.

Many interesting questions were raised through this project which will be investigated. For example, it is now questioned whether after 15 years with no phosphorus application, even with high Mehlich 3 phosphorus concentrations in the soil, that this phosphorus is labile and available for offsite transport or crop uptake.

Grant: 2013-\$12,985



Small Grains Research

ASSESSING THE BENEFITS OF INTERSEEDING COMMODITY WHEAT INTO FORAGE RADISH

ROBERT KRATOCHVIL
*University of Maryland, Plant
Science & Landscape Architecture*

Forage or tillage radish is a Brassica species that is becoming more widely used as a cover crop in Maryland. It has the advantages of consuming high rates of residual nitrogen while at the same time potentially reducing soil compaction via the large tap root it can produce. It is killed by freezing temperatures during the winter which means no spring herbicide is necessary. It is becoming a popular aerial seeded cover crop because of its small seed size that provides economic and application efficiencies for aerial applicators. A disadvantage is the necessity for it to be planted relatively early (late August-early September) compared to cereals to achieve adequate fall growth. Aerial over-seeding of corn and soybean fields alleviates this, but as is the case for any surface broadcast method, it is dependent upon the amount and timeliness of fall rains for good stand establishment.

There have been reports from Ohio and Pennsylvania that farmers who had failed to clean their drills of residual forage radish seed prior to planting winter wheat observed improved wheat growth and better yield where the mixture of seeds had been planted. This observation caused some farmers to conduct on-farm experiments with blends of wheat and forage radish. Testimonials from those farmers indicated yield increases of 5-15 bushel/acre for the blend.

This research conducts replicated trials to verify if a wheat/forage radish blend can provide a yield benefit. In addition, this study is evaluating inter-seeding wheat into established forage radish since Maryland wheat planting dates are considered too late for planting forage radish and expect good fall growth.

The results from the first year of this study conducted at two locations indicate that no yield benefit for wheat was observed for either planting it as a blend with forage radish or when it was interseeded into an established stand of forage radish. Also, no weed suppression effect caused by the forage radish was observed in wheat. A second year of this study is being conducted during 2013-2014 crop year.

Grant: 2013-\$6,000

ASSESSMENT OF FALL SOIL NITRATE TEST FOR SMALL GRAIN PRODUCTION

ROBERT KRATOCHVIL
*University of Maryland, Plant
Science & Landscape Architecture*

This project evaluates the effectiveness of the Fall Soil Nitrate Test (FSNT) to predict the need for fertilizer fall nitrogen for wheat across a range of Maryland soil conditions. The Maryland Department of Agriculture has initiated a regulation for use of fall nitrogen for small grains that is dependent upon a fall soil nitrate test. If the residual soil nitrate concentration for a field where wheat will be planted is 10 ppm or less (6-inch sample), 30 lb. N/acre will be allowed. If the nitrate concentration exceeds 10 ppm, no fall nitrogen is allowed. For a field to be planted to barley, the residual soil nitrate concentration is 15 ppm or less for allowance of 30 lb. fall nitrogen.

This study is the continuation of the evaluation of the FSNT, analyzing its effectiveness for wheat across a range of Maryland soil conditions. The results add to the growing number of field comparisons that have tested the Fall Soil Nitrate Test for determination of the need for fall fertilizer nitrogen. Additionally, the more side-by-side performance data that is developed allows further evaluation of the ability of this tool to assist farmers with the wheat fall nitrogen management decision.

Grants: 2013-\$5,000, 2014-\$8,250

GENETIC IMPROVEMENT AND TESTING OF SMALL GRAINS FOR MARYLAND

JOSÉ COSTA (*formerly with
University of Maryland, Plant
Science & Landscape Architecture*)
www.mdcrops.umd.edu

In the 2012/2013 growing season, over 3,500 yield trial plots of small grains were grown across five locations in Maryland (Poplar Hill, Salisbury, Wye, Clarksville, and Keedysville) as part of the small grains breeding and testing program. Additionally, over 15,000 head row selections were evaluated from segregating populations harvested at the Wye (Queenstown, MD). New wheat advanced soft red winter wheat lines are being tested across MD, KY, NC, and VA. These include several with enhanced scab (*Fusarium* head blight) resistance developed through DNA marker technology. Several new soft red winter wheat experimental lines with high grain yield, high test weight and resistance to scab and other diseases have been developed. In 2013/2014, additional testing and seed increase of these lines will be conducted.

Two very promising wheat experimental lines, MD04W249-11-7 and MD04W249-11-12, are being increased in a large scale for release in 2014. These lines showed excellent grain yields and high test weights in testing conducted across the USA in 2013 in the Southern Uniform Soft Red Winter Nursery. The line MD04W249-11-12 had the highest grain yield overall in the test that included a total of 33 wheat entries from public and private seed companies. Additionally, currently grown varieties and new lines of winter wheat and winter barley, including private and public cultivars, were tested across five locations under conventional tillage and no-till conditions in 2013. This test was also evaluated success in a misted and artificially scab-inoculated nursery in Salisbury and another test in Upper Marlboro for *Fusarium* head blight resistance with success.

Grant: 2013-\$33,000

WHEAT DISEASE MANAGEMENT

ARV GRYBAUSKAS
*University of Maryland, Plant
Science & Landscape Architecture*

Leaf blights are diseases that cause necrotic leaf spots and premature death of leaf tissue. The primary leaf blights that have been observed in our region in the past five years are *Stagonospora* leaf blotch and Tan spot. *Stagonospora* can also develop on wheat heads late in the season to cause glume blotch as well as the leaf blotch disease.

Fungicide applications made at jointing have been shown to help reduce Tan spot in the upper Midwest. Testing has been done on the effectiveness of fungicides products and when they are applied on a range of diseases that occur in the Mid-Atlantic. Wheat trials in 2013 were planted after wheat to favor the development of leaf blighting diseases and to test the effectiveness of fungicides and different application times on their management. *Stagonospora* was the only leaf blighting disease that developed in 2013. Although some suppression of disease does occur by fungicides when applied at jointing, the lack of upper canopy protection if no other treatment is applied later in the season produces little or no yield response. An early application combined with one application either at flag leaf or flowering often produced somewhat higher yields than one application at the later timing. However, none of the two or even three application treatments were statistically better than a single application that was made when the upper canopy leaves were completely formed.

Due to the lack of Tan spot developing in 2013, no isolations were made this season. *Fusarium* head blight or scab of wheat causes losses from poorly filled grains as well as from toxins that accumulate in the grain that result from fungal infection of the seed. It is generally understood that the highest levels of disease and toxin accumulation occur in susceptible varieties when infection occurs at the beginning of

flowering. It is also generally accepted that fungicide application as close to flowering is optimal, but it is difficult to apply a fungicide at the optimum time in a commercial setting. The time of scab infection and the timing of a fungicide application to better define the period when effective fungicide disease management on a commercial scale can be accomplished was studied. In trials from 2012 and 2013, the scab recommended products can be effectively utilized over a seven-day window once the crop has begun to flower.

Grant: 2013-\$14,000

TIMING FOR WHEAT SPRING NITROGEN

ROBERT KRATOCHVIL
University of Maryland, Plant Science & Landscape Architecture

The University of Maryland Extension recommends that spring nitrogen applications be split; the first at “greenup” and the second at jointing. “Greenup” needs to be better defined because wheat growth is influenced by accumulation of growing degree units (GDUs) with 1200 GDUs required for three tillers, the number of tillers/plant considered sufficient for optimum yield for a good wheat stand. In addition, winter wheat growth is influenced by increasing daylight hours following the winter solstice. Accumulation of approximately 700 GDUs following the winter solstice signals the end of vegetative growth and initiation of the jointing growth stage. It is important to have adequate nitrogen available during late winter to support the tillers that have formed and will form prior to initiation of jointing.

A multi-year and location study began in 2010 to identify when that first application of spring nitrogen should be for optimum production and if it can be predicted by GDU accumulation. The four “greenup” nitrogen target dates for application of 40 lb./acre were: 1) accumulation of 1200 GDUs from planting; 2) February 1-15; 3) March 1st or as close to this date as possible; and, 4) March 10-20. A total of 11 Maryland sites have been used.

Wheat planting dates ranged from early October to early November.

Each fall and winter season for the three completed years of this study has been different. Two of the winters (2010-2011 and 2012-2013) were considered colder than average and average, respectively, while 2011-2012 was much warmer than average. For the two colder winters, first application of spring nitrogen between early February and March 1st provided the best response at all six locations. For the warmer winter, first application of spring nitrogen during mid-March produced the best yield at four of five locations. At Keedysville, the one 2011-2012 location where this did not occur, the wheat responded best to the late January first application.

The response during the warmer 2011-2012 winter is attributed to the following factors. Wheat was planted behind drought impacted corn at all locations. Considerable amounts of residual nitrogen were present at those study sites. The weather during late fall and winter following wheat planting was dryer than normal keeping the residual nitrogen pool accessible to the wheat. And, the warmer than usual late fall and winter allowed some mineralization to occur contributing additional nitrogen to the pool. Finally, even though the late date for nitrogen application produced best, it would not be the standard practice because Maryland Department of Agriculture uses a target date of March 1st for first application of spring nitrogen. Thus, the result observed 2011-2012 is considered an anomaly.

The results attained during the 2010-2011 and 2012-2013 seasons are considered more typical. For these two years, first application of spring nitrogen during February to March 1st consistently produced best yield. Average GDU accumulation from January 1st for this response was approximately 250. The final year of this study, 2013-2014, is providing a much colder than normal winter for wheat and will allow further testing of the GDU approach to determining first nitrogen application date.

Grant: 2013-\$8,000

Small Grains Research

FALLING NUMBER RESEARCH ON WHEAT (PRE-HARVEST SPROUTING)

JOSÉ COSTA, AARON COOPER,
ROBERT KRATOCHVIL
University of Maryland, Plant Science & Landscape Architecture

The level of resistance or susceptibility to field pre-harvest sprouting, measured by the Falling Number test, is being evaluated with samples from wheat cultivars grown in Maryland. The Falling number test is used by grain buyers to determine the baking quality of the grain. A high falling number indicates the wheat is sound and satisfactory for most baking processes. Some cultivars retain this higher number even after exposure to several rain events. This information is valuable to Maryland farmers as an aid in planting choice of varieties of soft red winter wheat currently available to Maryland wheat growers.

In 2012, samples were taken at the normal (“early”) harvest time and then taken 30 days after that normal harvest (“late” harvest: after several rain events) in Salisbury, so they would be exposed to weathering and sprouting. Falling number tests were conducted on all samples at the USDA-ARS, Soft Wheat Quality Laboratory in Ohio. After exposure to weathering some cultivars still had relatively high Falling Number values, indicating good quality and most resistant to pre-harvest sprouting. These included: SY 9978, Coker 9553, Excel 166, SS8700, SS8600, SS8404, Merl, FS801, and USG3201 among others.

In 2013, conditions for harvest were wet during harvest and thus several locations were naturally exposed to field sprouting at harvest time. One location (Poplar Hill) was harvested after exposure to weathering. The 2013 samples are being processed at the Wheat Quality Lab in Wooster, Ohio and the results will be posted on www.mdcrops.umd.edu.

Grant: 2013-\$4,000

ALTERNATIVE MANAGEMENT SYSTEMS OF “LOW RATE HIGH EFFICIENCY FERTILIZERS” COMPARED TO TRADITIONAL FERTILIZER PROGRAMS

RONALD MULFORD
Mulford Agronomics

Research was initiated for this two-year project of five studies.

1) An evaluation of management systems using the “Low Rate High Efficiency Fertilizers” of the Agro-Culture Liquid Fertilizer Company compared to the University fertilizer program. Minimum tillage wheat (chisel plow disked twice) was planted after corn.

2) The evaluation of new wheat production programs, including the University fertility programs, to that of the Monty's Company for no-till and minimum tillage wheat, planted after no-till corn and soybeans.

3) This traditional study evaluates six wheat varieties to three levels of management for maximum economic yield. Two fungicide programs are compared to no fungicide use. The three management programs receive 110 lbs. of spring applied nitrogen.

4) No-till wheat managed for high wheat yields, with and without fall starter nitrogen are compared, following four tillage systems in corn after broiler manure was applied at two tons/acre. One treatment is managed using Agro-Culture Liquid Fertilizer program.

5) A rotation of wheat/double crop soybeans followed by no-till corn using the Grower's Mineral Fertilizer program is compared to the University fertility program. The study is being managed for 100 bu./acre of wheat, 175 bu./acre of corn, and 50 bu./acre of double crop soybeans. The Grower's program promotes base saturations of Ca 80-85%, Mg 17%, and K 7%. This rotation system was initiated in 2011. To date, there is no difference between the Grower's system and the University program in grain yields of corn and wheat followed by double-crop soybeans.

Grants: 2013-\$5,000, 2014-\$5,000



Corn Research

ASSESSMENT OF YIELD GRAINS AND POTENTIAL NON-TARGET EFFECTS OF CORN SEED TREATMENTS

MARIAM LEIKVEISHVILI
University of Maryland

The first year of this project addressed whether any adverse non-target effects on beneficial soil communities might occur with the use of multiple-pesticide seed treatments and if higher insecticide doses are economically justified.

Beneficial invertebrate organisms that inhabit surface litter and microarthropods in the soil and roots were sampled from corn plots planted with untreated, fungicide only, Avicta Complete, and Acceleron/Poncho 500/Volivo treated seed. Root surface communities of springtails and soil mites were negatively affected by the multiple-pesticide seed treatments within the first three weeks after planting, but communities appeared to recover. Beneficial mites in soil showed no seed treatment differences or consistent patterns that would indicate adverse effects. Litter bags measured above and below-ground microarthropod communities revealed no evidence of adverse effects.

Results suggest the multiple-pesticide seed treatment products had relatively short-term disturbances on mite and springtail populations. The seed treatments were evaluated in the state corn trials, and data indicated no significant yield gains or increases in stand populations comparing the low rates of Cruiser and Poncho with seed treatments of Avicta Complete and Acceleron/Poncho 500/Volivo.

Grants: 2013-\$26,610; 2014-\$8,698

THE INFLUENCE OF SEED TREATMENTS ON SLUGS AND THEIR PREDATORS IN MID-ATLANTIC GRAIN FIELDS

JOHN TOOKER
Pennsylvania State University

The goal of this one-year grant was to continue studying factors influencing populations of slugs in Mid-Atlantic no-till grain fields with the expectation that understanding slug ecology will help develop viable alternative management options. According to many Mid-Atlantic no-till growers, slugs are among the most problematic pests that they face.

In the past few years, the hypothesis that neonicotinoid seed treatments can exacerbate slug outbreaks in soybean and corn fields has been studied. Lab evidence was found with soybeans and corn that neonicotinoid insecticides presented as seed treatments are ingested by slugs with no measurable effects, yet when predaceous beetles attack these insecticide-containing slugs, the beetles can be poisoned and sometimes killed. Strong evidence has been detected from the field research that this poisoning of slug predators allows slug populations to cause more damage to crops.

In 2013, research confirmed that corn and soybeans plantings established with seed treatments tend to have greater slug populations. The amounts of neonicotinoids in slugs were quantified and found concentrations in excess of 200 parts per billion.

The results suggest that insecticidal seed treatments may exacerbate slugs' problems. They also reveal that neonicotinoid presented as seed treatments are quite labile and can be taken up by different plant and animal species, providing multiple avenues of escape and routes of exposure to others in the community. Continuing research will assess the ecological repercussions of these exposures.

Grants: 2013-\$25,209; 2014-\$24,868

FUNGICIDES AND FUNGICIDE USE THRESHOLD IN MARYLAND FIELD CORN PRODUCTION

ARV GRYBAUSKAS
University of Maryland, Plant Science & Landscape Architecture

The basic response threshold for an economical fungicide return in corn disease management appears to be when leaf lesions occupy more than 5% of the ear leaf area by the end of the grain-fill period. Unfortunately no early season threshold exists that will predict this late season disease level. This research has been conducted to determine the effectiveness of currently available fungicides on gray leaf spot suppression and to determine if a significant yield response could be forecast at the time fungicide applications are typically made.

In the trials conducted in 2013, Gray leaf spot developed to a moderately severe level due to favorable conditions and planting no-till into corn stubble following two to three years of continuous corn production. Disease severity at the end of the grain-fill period was significantly reduced by hybrid resistance and by fungicide treatments when applied at silking (R1). Fungicide treatments applied at early vegetative stages, five to seven collar corn (V5-V7) did not significantly affect final disease severity. Fungicides applied at V8-V10 reduced final disease severity but only marginally affected yield. Grain yield was affected by hybrid and also was significantly increased over the untreated control primarily by fungicide applications made at R1. Several combination treatments significantly increased yield and had numerically higher yields than their R1 component alone. However, none of these yield responses were significantly higher than when fungicides were applied at R1 only.

The impact of disease on net leaf photosynthesis indicates that the standard visual assessment of diseases fairly accurately reflects both the loss of leaf area and the changes in respiration that occur as a result of disease. For some diseases

the lesion area represents only the tip of the iceberg when lesions occupy a moderate amount of the leaf area but not when small or large. The simpler relationship that has been found for gray leaf spot regarding lesion size and damage, and that the effectiveness of fungicides is greatest when applied at R1 will help devise thresholds for determining when a fungicide is likely to produce an economic return. Further analyses are being conducted.

Grant: 2013-\$12,000

STATE CORN TEST: BENCHMARK HYBRIDS

ROBERT KRATOCHVIL
University of Maryland, Plant Science & Landscape Architecture
www.md crops.umd.edu

Beginning in 2001 and every year since, Maryland Grain Producers Utilization Board has funded the inclusion of benchmark hybrids that are used as checks in the University of Maryland Corn Hybrid Performance Tests. During 2013, nine benchmark hybrids were included in the three maturity group tests conducted at five Maryland locations. Three companies were represented by those nine hybrids; Pioneer (3), Dekalb (3), and Augusta Seed (3). The 75 hybrids tested ranged the spectrum of genetic technology; from conventional (non-genetically modified) to SMART STAX and RIB (refuge in the bag).

Corn performance during 2013 was very good. Average yield for the 75 hybrids was 192 bushel/acre, 45 bushel/acre more than the 2012 average of 147 bushel/acre. For the 2013 crop, the Maryland Department of Agriculture is estimating a record 159 bushel/acre. The 2013 season favored hybrids with relative maturity greater than 112 days (29 hybrids averaged 203 bushel/acre). Early season hybrids (less than 108 day relative maturity) did not perform as well during 2013 (175 bushel/acre for 17 hybrids). The complete 2013 report (Agronomy Facts No. 54), as well as reports from previous years, can be viewed by visiting www.md crops.umd.edu.

Grants: 2013-\$5,750; 2014-\$8,250

MGPUB
2015 Grant Deadline
December 1, 2014

For details, visit
marylandgrain.com

Corn Research

EVALUATING LOW RATE HIGH EFFICIENCY FERTILIZER TECHNOLOGY TO UNIVERSITY OF MARYLAND PRACTICES

ROBERT KRATOCHVIL
AND RONALD MULFORD
*University of Maryland, Plant
Science & Landscape Architecture*

In the first study, Low Rate Liquid Fertilizer Programs were compared to a corn production program recommended by the University of Maryland. The 2013 no-till corn rotation results showed that for the second year, the “Low Volume High Efficiency” programs of Grower’s Mineral Solutions, Agricultural Liquid Fertilizers, Monty’s Liquid Fertilizer’s and Crop Production Services have been similar to the corn production system recommended by the University. This research project will be continued in 2014 for a final assessment of this alternate technology in corn production.

The major objective of the second study is to maintain soil phosphorous within University of Maryland recommendations for continuous use of a pre-plant broadcast application of broiler manure before planting corn. Results show: 1) Starter fertilizer seemed to have no influence on corn yield, 2) V Ripping between rows, after manure application, gave the highest grain yield in 2013, which is consistent with corn yields in past years. The feeling is that any movement of broiler manure nutrients from rainfall runs into the narrow slot left from the ripper shank. There may be some physical advantages of shallow ripping the soil, and 3) Residual soil phosphorous is the lowest with the chisel plow/disk tillage system, but this system produces the lowest grain yields.

Grants: 2013-\$5,000; 2014-\$7,000

A SYSTEMS APPROACH TO EVALUATE CURRENT PRODUCTION PRACTICES

ROBERT KRATOCHVIL
AND RONALD MULFORD
*University of Maryland, Plant
Science & Landscape Architecture*

This project seeks to determine the agronomic approach to managing corn production as average yields approach 200 bushel/acre. More efficient use of production inputs, such as nitrogen and N-P-K fertilizers, was analyzed. Dribbling or applying 30% liquid nitrogen solution (30% UAN) in a solid stream has become the most common method for applying side-dress nitrogen in field corn. While coulter injection makes more efficient use of the side-dress nitrogen, the equipment is much more expensive than placing UAN solution on the soil surface in a solid stream. Results showed that at 140 lbs. N/acre, 30% UAN coulter injected compared to dribbling at side-dress, improved corn grain yields by 14 bushel/acre. Another treatment comparison showed that by adding the nitrogen additive eNhance from AgroCulture Liquid Fertilizer, coulter injection was only one bushel/acre better than dribbling the nitrogen solution.

In a study comparing YARA’S homogenous calcium ammonium nitrate N-P-K-S dry fertilizer to a standard broadcast dry fertilizer and liquid 2x2 starter improved grain yields. Results showed that the average bushel/acre of three YARA fertilizer treatments (average nitrogen rate of 116.7 lbs./acre) was 167.8 bushel/acre compared to 145.4 bushel/acre for the three conventional fertilizer treatments (average nitrogen rate 133.3 lbs./acre).

Grant: 2013-\$5,000

DETERMINING THE IDEAL IRRIGATION STRATEGY FOR HIGH INTENSITY CORN PRODUCTION

JAMES ADKINS
*University of Delaware
<http://extension.udel.edu/ag/irrigation>*

The goal of this three-year project is to determine the ideal irrigation management strategy for intensively managed irrigated corn through replicated testing of 11 levels of irrigation intensity ranging from very wet to non-irrigated.

Overall, irrigated yields for the 2013 season were seriously limited by excessive moisture with measured yields 15%-20% lower than were obtained last season. Plots irrigated at 80% of predicted crop evapotranspiration, 20 centibars soil moisture trigger (wet all season), and 100% of evapotranspiration treatments were the top performers with measured yields (but statistically the same) of 235 bushel/acre, 234 bushel/acre, and 226 bushel/acre respectively.

In the absence of a method to prevent rainfall from affecting the plots, several years of continued research will be required to develop sound irrigation recommendations. While using any of the resulting data to adjust irrigation strategies is strongly discouraged, this first year of research demonstrates the ability of modern corn hybrids to produce under wet growing conditions.

Grants: 2013-\$25,705; 2014-\$26,206

MANAGING SUB-SURFACE DRIP IRRIGATION FOR MAXIMUM PROFITABILITY IN CORN

JAMES ADKINS
*University of Delaware
<http://extension.udel.edu/ag/irrigation>*

Utilization of Sub-Surface Drip Irrigation (SDI) as a tool to efficiently irrigate land previously considered too cost prohibitive to irrigate is quickly expanding on Delmarva. This three-year project studies a total of five irrigation treatments, replicated four times to define the best practices to manage SDI over a range of local soil types. Treatments include evapotranspiration based schedules with daily irrigations to replace what the plant used to four soil moisture triggered treatments ranging very wet (15 centibars) to moderately dry (45 centibars).

Overall, the 2013 SDI managed corn crop received a seasonal total of 25” of rain with only 9” of that rain being effective or capable of being stored in the root zone. As a result, yields were highly variable depending on soil type and failed to show any significant statistical difference between treatments. All of the plots were negatively impacted by excessive moisture by 20%+ over previous years with the top producing plot, the 35 centibars “moderate” soil moisture trigger, yielding just 209.9 bushel/acre.

Grants: 2013-\$21,249; 2014-\$23,017

NEW 2014 RESEARCH GRANTS

UNIVERSITY OF DELAWARE

- ✓ Evaluation of Fall Soil Nitrate Testing and Fertilization for Establishment of Small Grains and Cover Crops under Irrigated and Non-Irrigated Conditions, \$8,050
- ✓ Trends in Soil Test Phosphorous and Sorption Capacity following Long-term Application of Poultry Litter and Commercial Fertilizers, \$13,650
- ✓ Wheat Disease Management: Examining the Economic Returns and Utility of Fungicide Application Programs to Manage Leaf Bloch Complex, \$4,728

CLEAR SPRING HIGH SCHOOL

- ✓ Row Crops Test Plots to Alleviate Deer Pressure, \$5,000

UNIVERSITY OF MARYLAND

- ✓ Evaluate Triticale as a Cover Crop Alternative to Rye and Wheat, \$3,455
- ✓ Measuring Corn Nitrogen Use Efficiency and Fate with Labeled Nitrogen, \$11,500
- ✓ New Variety Development and Testing of Small Grains in Maryland for Higher Yield and Disease Resistance, \$33,000

MULFORD AGRONOMICS

- ✓ Poultry Manure Management on High Phosphorous Soils, \$7,500



Image of Ag

COMMONGROUND

MARYLAND SOYBEAN BOARD
www.findourcommonground.com

CommonGround is a national collaboration by farm women to reach urban consumers with the true story of modern farming. This grassroots program puts a face on agriculture, showing that farmers and their families share consumers' values and concerns.

Through the CommonGround Conference, farm women were provided the opportunity to gain skills in how to effectively relay their personal perspectives on farming and food to consumers. Speakers, materials and exercises helped prepare them to answer questions and address issues they would encounter as the volunteers participated in events and activities. Volunteers were provided with credible third-party resources to back up their personal knowledge. The combination of genuine, personal experiences and credible science is key to developing lasting consumer trust. The spokeswomen improved their communication skills to reach key urban and suburban consumers and influencers through events, social media and publicity conducted in the Mid-Atlantic.

Over a million baseball fans attend minor league games in the DC/Baltimore metropolitan area, with 70% of the fans having children and a household income over \$75,000. This grant provided funding to reach those attendees with a "Healthy Tip of the Game" message at every game at four ballparks all season. The messages focused on nutritious food and a healthy environment.

Participating volunteers included Hannah Amoss, Belinda Burrier, Jennifer Cross, Jennifer Debnam, Cindi Filaski, Michele Johnson, Jennie Schmidt, Mary Stewart, Cara Sylvester and Christy Wright.

Grants: 2013-\$13,900; 2014-\$15,000

SEASONS ON THE FARM

CENTER FOR FOOD INTEGRITY
www.seasonsonthefarm.org

Seasons on the Farm capitalizes on what has been learned from the Center for Food Integrity on-going consumer research, while building on the success of Farmers Feed US. The platform uses dynamic, long-term engagement with media, influencers, and community leaders, incorporating the power of on-farm experiences and the flexibility and endurance of online communication to create meaningful and sustained dialogue that builds trust in today's farming.

Research suggests that stand-alone events like the dinner on the farm coordinated in June, having hosted 45 attendees and raised \$3,300 for the Food Bank of Delaware, can serve as a catalyst for meaningful conversations, but they are not enough to positively impact consumer trust. The elements of ongoing event development, local media outreach and social media engagement are critical, and why continued development of the platform is necessary.

Creating new opportunities to build consumer trust in agriculture by making connections between farmers, media, bloggers, and local opinion leaders is becoming increasingly important, as they are often responsible for driving consumer thought on food-related issues. The longer-term goal is to grow the size of their outreach and these dinners each year in the hope that they become foundational events for both the farming and hunger communities, as well as an opportunity to demonstrate the values that today's farmers share with everyone in their community and state. In doing so, consumer trust and confidence in today's farming will grow.

Grant: 2013-\$15,000

HERE WE GROW EXHIBIT

PORT DISCOVERY
CHILDREN'S MUSEUM
www.portdiscovery.org

With the support, interest, input, and commitment of Maryland's agricultural community, this project has advanced from its initial goal to renovate the Museum's out-dated farm exhibit, to an expanded vision for the design and creation of a completely new exhibit to better serve the educational needs of Maryland's children: *Here We Grow!* Agriculture is an exciting interdisciplinary field overflowing with content that can engage children of all ages with safe, creative learning experiences. This plan will place Port Discovery's new exhibit on farming and agriculture in a prominent location within the Museum and will serve a broad set of educational objectives by focusing on modern agriculture. The *Here We Grow!* exhibit will expose children and their caregivers to the ways in which their lives are integrally connected to the people, plants, animals, technology, and activities that comprise farming and the modern agricultural industry.

Using an agricultural framework focused on local and global economies, labor, and environment and conservation, the exhibit will provide joyful learning opportunities to develop literacy, gross and fine motor skills, and mathematical and scientific skills such as logic, critical thinking, and problem-solving. *Here We Grow!* will introduce children to 21st century learning skills and 21st century agriculture.

Grants: 2013-\$15,000; 2014-\$15,000

DIETITIANS WHEAT ALL-STARS CONTEST

WHEAT FOODS COUNCIL
www.wheatfoods.org

The Wheat Foods Council (WFC) implemented a Wheat All-Stars Contest for supermarket registered dietitians to encourage use of WFC materials. One of the WFC goals for this year was to

engage the dietitians. They speak and interact with media and consumers on a regular basis and are growing in popularity, strength and influence. WFC created three toolkits specifically for the use by the 1,500 dietitians.

Strong interest in the contest came from a number of major chains including Safeway, Wegmans, Hy-Vee, Supervalu, and Hannaford. The contest was featured on the Wheat Foods Council website, plus promotional information sent to e-magazine subscribers (2,399), media contacts (1,042), and tweeted on WFC twitter account (750).

WFC stayed in touch with the supermarket dietitian community by sending regular reminder emails about the contest throughout February-June 2013, with the contest emails regularly opened by close to 50 SRDs.

WFC promoted the contest at the "Shopping for Health" conference in Phoenix, AZ, attended by select group of 25 influential supermarket dietitians for major supermarket chains.

Grants: 2013-\$16,000; 2014-\$16,000

VIDEO PRODUCTION

MARYLAND DEPARTMENT
OF AGRICULTURE
www.mda.state.md.us

In 2013, The Maryland Department of Agriculture contracted with photographer Edwin Remsberg to produce five soundbooks. These featured farmers Kevin Anderson, Tom Gannon, Eric Spates, Paul Spies, and Marion Wilson. By December 1st, these short videos had been viewed 1,131 times in the four months since their completion. Videos are used on the Internet at www.marylandsbest.net and are tweeted and used on Maryland's Best Facebook pages to promote the production agriculture sector.

MDA also used the grant to support a display of agricultural photos in the Maryland State Senate Building in the winter and spring of 2013.

Grant: 2013-\$6,800

GRAIN PROMOTION AND SUPPORT

MARYLAND GRAIN PRODUCERS ASSOCIATION
www.marylandgrain.com

The Maryland Grain Producers Association (MGPA) provides support services to the Maryland Grain Producers Utilization Board, including the development of a public relations campaign with the news media, paid advertising, running the informational website, www.marylandgrain.com and the organization's Facebook page; conducting an annual meeting to promote MGPUB functions; organizing the scholarship program for college students enrolled in agricultural programs; promoting expanded utilization of grain; and expanding education efforts on grain and agriculture through exhibits at fairs and events statewide throughout the year.

An advertising campaign was launched this year with the theme of "Find the Facts", utilizing photos of local farmers with facts disseminated about farm practices, ethanol, environmental benefits, the consumer food dollar, and more. These facts were displayed on four billboards on Route 50, exhibit banners, a new series of signs available to farmers to post at their markets or fairgrounds, MPT program ads, and Facebook and website ads. A bumper sticker contest was conducted to promote that "Maryland Farmers Protect the Bay Every Day".

Involvement in the development, production and promotion of the MPT *Maryland Farm and Harvest* program has effectively launched the new series featuring grain farmers, board members, and farm neighbors in an enlightening and entertaining look at Maryland agriculture. This program will go a long way in educating Marylanders about the advanced industry that Maryland farming is, and what farmers do to protect the environment while producing the food, fiber and fuel that our country requires.

Grants: 2013-\$146,200; 2014-\$162,000

MARYLAND FARM & HARVEST

MARYLAND PUBLIC TELEVISION
www.mpt.org/farm

Maryland Farm & Harvest is a new 13-episode series that puts a human face on farming, educates viewers about agriculture, and tells the stories of the industry that built this nation and continues to feed the world. Following its debut in November 2013, the series successfully captured the number one ranking for local MPT programming. The series will repeat until the launch of the second season currently in production.

Grants: 2013-\$250,000; 2014-\$250,000

NATIONAL AG DAY

AG COUNCIL OF AMERICA
www.agday.org

In celebration of the 40th annual National Ag Day, on March 19, 2013, the Agriculture Council of America welcomed leaders from national agricultural associations, congressional members and student representatives to Washington, DC.

Over 100 student delegates delivered the message of Ag Day to members of Congress and their staffs. A luncheon followed at the U.S. Capitol Building, attended by the John Deere Outstanding Young Farmer honorees.

Tom Vilsack, U.S. Secretary of Agriculture, addressed a sold out crowd at the National Celebration of Agriculture Dinner at the USDA Whitten Building Patio. Also in attendance was Miss America 2011, Teresa Scanlan, who spoke on her partnership with The Great American Wheat Harvest documentary. Highly acclaimed chef Mark Salter, Robert Morris Inn, prepared the meal. Well-known agricultural broadcaster Orion Samuelson served as the evening's emcee. The 2013 National Ag Day celebration has been called the 'best yet.' Energy was high, and events were well attended with 300 at the luncheon and 170 at dinner.

Grants: 2013-\$500; 2014-\$500

Image of Ag

FARM STEWARDSHIP CERTIFICATION AND ASSESSMENT PROGRAM

MARYLAND ASSOCIATION OF SOIL CONSERVATION DISTRICTS
www.mascd.net

The Maryland Association of Soil Conservation Districts has teamed up with the Chesapeake Bay Foundation, Maryland Farm Bureau, Maryland Department of Agriculture and USDA — Natural Resources Conservation Service to establish and maintain the Farm Stewardship Certification and Assessment Program (FSCAP). This program provides a voluntary on-farm evaluation of stewardship

activities including compliance with nutrient management regulations, establishment of conservation best management practices (BMPs), an assessment of BMPs installed by the farmer at their cost for inclusion in the Bay model, and a review of current farming practices to assess opportunities for improvement.

FSCAP certification is awarded if a farmer meets the standard level of performance. Information and professional resources on additional ways to improve the operation are provided for the exclusive and voluntary use of the farmer. Every steward receives a FSCAP sign and signpost, and an individual webpage on the FSCAP website with a farm description and photos.

Grants: 2013-\$30,000; 2014-\$30,000

FARM STEWARDSHIP CERTIFICATION & ASSESSMENT PROGRAM CERTIFIED

Anne Arundel: Graden, Roedown Farm

Baltimore: Legacy Farm, Sagamore Farms

Caroline: Hidden Acres Farm

Carroll: Alfred's Inspiration Farm, Briar Patch Farm, Cherry Valley Equestrian Center, Clemsonville Christmas Tree Farm, Ensor Family Farm, Hickory Hollow Farms, Persimmon Tree Farm, Quiet Valley Farms, Runnymede Enlarged Farm, Separate Peace Farm, Shepherds Manor Creamery, Spring Mills Farm, Washington Farm

Cecil: Blue Waters Farm, Great House Farm, Tapeta Farm, Troop Farms

Dorchester: Lazy Day Farms, S.B. Farms

Frederick: Bloomsbury Forge, Gaver Tree Farm, Hawk Hill Farm, Hedgeapple Farm, Holterholm Farms, Peace and Plenty Farm, War Springs Farm

Garrett: Harman Farm, Jim Margroff Farm, The Fratz's Hayfield Farm

Kent: Chesapeake Farms, Fairfield Farm, St. Brigid's Farm

Montgomery: Breezy Hill Farm, Brooke Grove Farm, Potomac Horse Center, Surmont, LLC, Wyndham Oaks

Prince George's: CBF Clagett Farm, Edgewood Farm, Rover's Content

Queen Anne's: Deerfield Farm, Wye Angus Farm

Somerset: Go Away Acres, Sun Farm

St. Mary's: Mattaponi Farm, Moore or Less Farm, Old Sawmill Lane Farm, Roundabout Farm, Sassafras Creek Farm, Shamrock Arabians

Washington: Aliabaad Farm, Allenberg Orchards, Antietam Battlefield, Breezy Acres Dairy, Creek Bend Dairy Farm, Creek Bound Farms, Inc., Ernst Grain and Livestock, Green Acres Farmstead, Hendershot Farms, High Point Acres, Misty Meadow Farm, MM Ranch, Mountain Valley Orchard, Peace Hollow Farm, Pearson Farm, Rinehart Orchards, Stone Wall Angus, Thomas and Sons Farm

Wicomico: Allanbank Farm, Bethel Farm, Elysian Fields Farm, New Direction Farm, New Hope Farm, Overeasly & Kathys Too, Purgatory Farm, Sun's Farm



In the Classroom

MOBILE SCIENCE LABS and CORN AG LITERACY PROGRAM

MARYLAND AGRICULTURAL EDUCATION FOUNDATION
www.maefonline.com

Ten MG PUB grants were given to support Maryland elementary schools which have not had the Maryland Agricultural Education Foundation (MAEF) mobile science labs visit their schools. Each \$400 grant is matched with a \$400 grant from the Maryland Fair Board. MAEF promoted this opportunity to schools and farm bureaus across the state to help publicize the availability of the grants. Eight schools took advantage of this benefit, with two more pending in 2014. The schools were from rural, suburban and urban communities across the state. After experiencing the weeklong lab visits, many of the schools and their PTAs recognized the full value of the labs and committed to engaging a lab at their schools in future years. The benefits of the MG PUB's initial investments are paying long term dividends for schools and students.

The grant also supported the 2013 Ag Literacy program featuring the book *Corn*. Volunteers from across the state read to over 9,000 students. Over 410 books were purchased and donated to the schools' media centers.

Grants: 2013-\$7,775; 2014-\$13,625

KIDS GROWING WITH GRAINS - WASHINGTON

WASHINGTON COUNTY EXTENSION ADVISORY COUNCIL
<http://extension.umd.edu/washington-county>

The Washington County Youth Development Program presented Kids Growing with Grains, an agriculture education field trip, at the Western Maryland Research and Education Center (WMREC) September 24-27, 2013.

This program is available to all schools and targets primarily 4th graders. Each day is designed to meet the needs and interests of the school visiting.

Hands-on learning is offered at a variety of stations including: Grains and Agriculture, Grains and Science, Grains and Nutrition, Animal and Grains, and Grains Food Demonstration. Each station is staffed by a collaborative team of University of Maryland Extension (UME) Faculty and Staff, WMREC Faculty and Staff, UME volunteers and 4-H/FFA youth to engage the youth in learning the health benefits of grains and develop a connection between themselves and agriculture.

Grants: 2013-\$2,000; 2014-\$1,000

GRAINS NUTRITION FOR YOUTH

UNIVERSITY OF MARYLAND EXTENSION - FREDERICK COUNTY
<http://extension.umd.edu/frederick-county>

The FoodSmart Team has developed a fresh blending of nutrition education and agriculture literacy into one program "Grains Nutrition for Youth". Educators from three counties piloted resources, lessons, and activities compiled by the FoodSmart team in order to develop one concise educational kit for 4-H and extension educators statewide in Whole Grain Nutrition Education.

Training was offered statewide to educators, extension staff and volunteers on the newly developed Kids Growing with Grains curriculum. The participants attended the one-day training with five hands-on activities. The groups completed each lesson as if they were students participating in the program. Lesson topics included animal science, whole grain nutrition, grain scientist, and plant anatomy. Additionally, a lesson was developed for agriculture literacy highlighting six books regarding whole grains for each of the before-mentioned topics. The lesson included activities for each book to complement core five knowledge topics.

Upon completion of the training, each county received a notebook with the curriculum, six agriculture literacy books with corresponding lessons for teachers, and supplies for the lessons to include tortilla presses, animal by-products and teaching resources, to name a few. Participants were also provided links to the developed website for resources online so they could review the video clips, or print additional copies of handouts for participants and teachers.

In 2014, updates to the curriculum and development of the scripted resource guide will be developed.

Grants: 2013-\$5,000; 2014-\$5,000

KIDS GROWING WITH GRAINS

EXTENSION ADVISORY COUNCIL - FREDERICK COUNTY
<http://extension.umd.edu/frederick-county>

Thirty five public elementary schools and three private schools participated in the popular program that began over a decade ago. During the spring and fall programs, 5,259 youth and their teachers experienced the opportunity to learn about whole grains in their communities. Onsite, the students participated in four learning stations designed to teach them about grains.

They begin with a tour of the farm viewing fields in production, valuing machinery and recognizing grains from field to table. Each made a grain jar with five grains grown on the farm. At the corn station, students learned the many uses of corn and made tortillas using masa. The nutrition station explained the health benefits of eating grains. Students sampled steel cut oats and made buckwheat pancakes. At the animal station, students met cows, goats, and sheep and learned how much grain the animal is fed to produce for human needs. Each student received a recipe booklet to prepare whole grain foods at home.

Students participated in two activities in the classroom that focused on grain nutrition and production. While making a whole grain product, each student developed team building skills and learned the function of each ingredient. The students completed an Ag literacy reading program entitled "Corn" and identified the methods in which corn is grown, including types of equipment, varieties for corn, and the many uses for corn. Students also planted seeds to grow at home.

Grants: 2013-\$4,000; 2014-\$4,000

NEW 2014 EDUCATION GRANTS

UNIVERSITY OF MARYLAND EXTENSION

- ✓ Science on the Farm, \$1,000
- ✓ Trowels, Hoes and Veggies: Caroline Co. 4-H Afterschool Gardening, \$827
- ✓ Whole Grain Cuisine for Seniors, \$2,500

THE GREAT FREDERICK FAIR

- ✓ The Sukup Agri-Theatre at City Streets, Country Roads, \$1,000

**AGSPLOATION -
"THE SCIENCE OF
MARYLAND AGRICULTURE"**

UNIVERSITY OF MARYLAND
EXTENSION –
HOWARD COUNTY
[http://extension.umd.edu/
howard-county](http://extension.umd.edu/howard-county)

The AGsploration program has proven to be a successful avenue for increasing agriculture literacy and science proficiency. The focus of the 2013 year was increased dissemination of the curriculum into public and private schools and other education venues through the training of teachers and other youth development educators. A series of eight teacher in-service trainings were held in 2013 in eight different counties in the state, reaching 96 educators. Teachers attending these training in-service events received hands-on instruction, the full curriculum, and teaching materials for one of the four lesson tracks. Trainings were conducted in Anne Arundel, Caroline, Carroll, Montgomery, Prince George’s, Queen Anne’s, Talbot, and Washington counties.

Grain is well-represented through the AGsploration curriculum as the curriculum includes a Maryland grain component and utilizes grains and grain products in scientific learning experiences. At each teacher in-service training, lessons involving grains and grain products were specifically focused on with attendees participating in related hands-on activities.

Based on the post evaluation reports completed by in-service participants, 100% indicated they would use the curriculum. In addition, 65% of teachers felt more prepared to teach agriculture lessons after attending the training. The following quotes were provided by participants: “Great Program - every student K-12 should have the opportunity to learn this!” “This was a great workshop. I learned a lot. I am very excited about using the resources.

Instructors did great job explaining all the many avenues for us to utilize to further AG-education.”

In addition, the AGsploration Team presented two workshops at national meetings. The Galaxy Conference is a national meeting of the seven national extension professional organizations. During this presentation, 25 attendees received an overview of the AGsploration curriculum and were provided with instructions to access the curriculum online.

The North American Association for Environmental Education held their national conference in Baltimore. The AGsploration team taught a hands-on workshop for 11 educators with several being Maryland teachers. This group of educators received instructions to obtain the curriculum online so they could also conduct AGsploration lessons in their classrooms.

Grants: 2013-\$5,000; 2014-\$5,000

**THE ALL-GRAIN FARM TEAM
POWERS AMERICA**

LASER LETTERS, INC.
www.allgrainfarmteam.com

An ongoing project since 2011, the “The All Grain Farm Team Powers America” continues to promote and distribute a 12-page student activity booklet that teaches Maryland elementary students about grains, agriculture and farming and where their food comes from. In addition to the booklet, “The All Grain” project includes a supporting website, animated introductory video and classroom resources.

To date, 60,000 booklets have been distributed to Maryland students through county school systems, county extension, MAEF, state and county Farm Bureaus, agriculture resource groups and individual teachers and youth groups throughout Maryland.

Grants: 2013-\$25,000; 2014-\$31,000

In the Classroom

**SMALL GRAIN PRODUCTION
HANDS-ON LEARNING
EXPERIENCES TO AT-RISK
YOUTH**

UNIVERSITY OF
MARYLAND EXTENSION -
CARROLL COUNTY
[http://extension.umd.edu/
carroll-county](http://extension.umd.edu/carroll-county)

The Ag-Ventures Program is designed to target fourth grade students to further their knowledge of Maryland agriculture with a focus on grains. Three title one schools in Carroll County were selected to participate in Ag-Ventures. Students had an opportunity to rotate through stations consisting of Grain Production, Grain Identification, Grain Nutrition, Animal Nutrition (Dairy/Beef), Poultry Production, and Watersheds which were taught by University of Maryland Extension Faculty. Students cycled through each station every 30 minutes and participated in a variety of hands-on lessons. Students had the opportunity to identify grains while making grain jars, create a healthy whole grain snack, see farm equipment up close, experience land use best management practices, experiment with milk, and interact with live chickens.

At the conclusion of the program, students and teachers provided feedback of the program. It was found that 95% of teachers and chaperones were satisfied with the program and many found it to be the most educational field trip they had been on. Based on pre- and post-test evaluations of the three schools consisting of 186 students, an average of 46% increased knowledge was found through the program.

Grants: 2013-\$1,000; 2014-\$2,000

**CLOSE ENCOUNTERS
WITH AGRICULTURE**

UNIVERSITY OF MARYLAND
EXTENSION - MONTGOMERY
COUNTY
[http://extension.umd.edu/
montgomery-county](http://extension.umd.edu/montgomery-county)

The Close Encounters with Agriculture program promotes and increases the understanding of agriculture. It also demonstrates the inter-relationships and positive aspects of production agriculture, nutrition and the environment. A total of 3,369 fourth-grade students, and 593 teachers and chaperones participated in the program in October 2013.

The program is evaluated through pre- and post-tests for the students, and by teacher evaluations. Tests were redesigned this year in attempt to better capture changes in student knowledge. Students scored an average of 25 percent correct on the pre-test. After participating in the program, students test scores rose to 71.9 percent correct on the post-test in 2013.

Overall teacher evaluation scores averaged 4.81 with 5.00 being the highest score. Ninety-eight percent of participating teachers rated the program a four or five on a scale of one to five. Teachers responded overwhelmingly (91%) that their children had a much better understanding of agriculture after participating in this program.

Close Encounters is a nationally recognized University of Maryland program. The program has won awards from the American Farm Bureau, the National Association of County Agricultural Agents, the Joint Council of Extension Professionals, and Epsilon Sigma Phi the national Extension honorary fraternity.

Grants: 2013-\$6,000; 2014-\$6,000



Developing Leaders

DEVELOPMENT OF FUTURE AGRICULTURE LEADERS

MARYLAND FFA FOUNDATION
www.mdffaoundation.org

In 2013, this grant funded four FFA career development events (CDE) consisting of Agricultural Issues, two Agriscience Presentation Areas, and Junior Extemporaneous Speaking, FFA proficiency award, leadership development workshop presenters, five individual leadership incentive grant scholarships, and a speaker and breakfast sponsorship at the State FFA Convention. CDE sponsorship provides funds for the recognition of student achievement and helps reduce student costs in representing Maryland at the next level of competition. The grant also provided State FFA Convention facilities support, helping to provide a valuable experience for over 300 Maryland FFA members at a reasonable student cost.

Five convention attendees received leadership grant scholarships based on chapter achievements and financial need. Three scholarships provided funding to attend the State FFA Convention; two provided funding to attend the National FFA Convention. Members of the FFA Foundation Board believe the development of agricultural leaders is vital to the future of Maryland agriculture and are committed to helping the Maryland FFA Program stand out as one of the Nation's best.

Grants: 2013-\$13,000; 2014-\$13,000

LEAD MARYLAND PROGRAM

LEAD MARYLAND FOUNDATION, INC.
www.leadmaryland.org

The LEAD Maryland Foundation (LEAD) works to increase the numbers and capacity of leaders serving agriculture. As a 501(c)(3) nonprofit, LEAD relies on grants and donations to support educational programming offered to LEAD Fellows, who learn through lectures, tours, discussions, presentations, trainings, assessments, and group projects.

In 2013, LEAD Fellows completed a series of five multi-day seminars, for a total of sixteen days in class. Seminars were held at locations throughout Maryland and Washington, DC. Fellows learned about working with the media, public speaking, land use issues in Maryland, activities of the Port of Baltimore, the economic impact of agriculture, rural community development, food policy and the local food movement, engaging and educating adults and youth about agriculture topics, and much more. The LEAD fellowship curriculum focuses on providing public issues education, leadership development, skills building, and personal growth. Through program participation, Fellows become more equipped and confident to solve problems, identify resources, educate the public, and to influence public policy.

Grants: 2013-\$40,000; 2014-\$60,000

TRACTOR SCHOOL: PTOs, ROLLOVERS, GRAIN BINS AND MORE!

UNIVERSITY OF MARYLAND EXTENSION - CAROLINE COUNTY
<http://extension.umd.edu/caroline-county>

This first-ever class for tractor certification was a combined effort of six Eastern Shore Extension 4-H and agriculture education staff members, with the assistance of the University of Delaware Extension safety specialist. The weekend format was a new approach that proved very successful. Twenty-five teens aged 14-16 passed the federal certification class and are trained in safe procedures to work on a farm. This format required concentration for each teen, including studying from a manual and reviewing an interactive CD before the class. Each teen worked hard to learn, as the class exam includes 50 multiple choice questions and a driving exam that covers knowledge of safe practices when using a tractor with a two-wheeled implement.

The weekend format included two visits to implement and tractor dealerships where the youth observed warning and danger signage, various old pieces of equipment, some with hazards and as well as new tractors and equipment. With 100% of the participants passing the exam, the weekend training proved that it is a successful program for the teens.

Grants: 2013-\$2,100; 2014-\$1,500

MARYLAND ENVIROTHON

MARYLAND ASSOCIATION OF SOIL CONSERVATION DISTRICTS
www.mascd.net/envirothon

The Maryland Envirothon is an environmental educational competition which enhances local high school's science curriculum by providing hands-on field based activities and instruction from natural resource professionals. During the school year, students are trained and tested in five natural resource areas: aquatics, forestry, soils, wildlife and a current environmental issue. In 2013, over 1,100 students from most Maryland counties were presented with the current environmental issue of "Pasture and Rangeland Management." Each student had the opportunity to be trained by soil scientists, biologists, foresters, and other natural-resource professionals as they prepared for the local, state and national competitions.

At the state event, students were challenged in forest measurements and tree identification, wildlife-species identification, soil classification and evaluation, aquatic biology and the fifth issue of pasture and rangeland management. The winning team was from Harford Christian School of Harford County. Those students had the honor of representing the state of Maryland at the North American Envirothon in Bozeman, Montana. They returned home with a new found knowledge of how to apply land stewardship practices to today's environmental concerns.

Even though Maryland schools are mandated to teach environmental education, outdoor learning activities are often limited due to challenges with budgets and scheduling. The Envirothon continues to fill the void by offering students such educational needs. All training materials, related activities, and transportation needs are offered to the students free of charge.

Grants: 2013-\$9,000; 2014-\$9,000



Paul Spies, Maryland Grain Producers Utilization Board President, presented \$2,500 college scholarships to Shelby Stabler (left), Clayborne Zimmerman (center), Joshua Ernst (right), Andrew Debnam and Abbey Linthicum (not pictured) to assist in their pursuit of a degree in agriculture. Winners are selected by a committee of farmers who score applications based on the students' major, academic grades, career goals and financial need. The 2013-14 recipients are model students, leaders in the community, and dedicated to advancing agriculture.

ETHANOL RACE CAR

BUNNY BURKETT RACING TEAM
www.bunnyburkett.com

The “Bunny & the Boys Funny Cars” fueled by ethanol, have been on display at fairs and festival across the Mid-Atlantic. The crew spoke with thousands of local drivers, making them aware of the benefits of using ethanol, how it is a renewable resource, and reduces America’s dependence on foreign oil. Bunny & Crew hand out boxes of literature on ethanol and the many uses of grain.

Besides the fair displays, over 100 more days per year are spent on East Coast highways with the ethanol logo prominently displayed on the trailer as the team travels to televised racing events. Besides promoting ethanol, the crew speaks on other uses of corn, including a variety of mass produced plastics, antifreeze, livestock feed, and food for a growing world. The end results are to help increase grain’s value at the farm gate.

Grants: 2013-\$10,500; 2014-\$10,500

FLEX FUEL AWARENESS CAMPAIGN

CLEAN FUELS DEVELOPMENT COALITION
www.cleanfuelsdc.org

The Clean Fuels Development Coalition (CFDC) and the Clean Fuels Foundation recently completed a project with the help of funds from the Maryland Grain Producers Utilization Board. This project was the continuation of ongoing efforts to promote E85 and high level blends in the state of Maryland in an effort to increase consumer acceptance of these fuels and create more demand.

The Maryland FFV (FlexFuel Vehicle) Awareness Campaign is reaching out to any interested parties to convey information on the availability of these fuels in Maryland as well as provide general information on ethanol and associated issues.

Brochures and numerous materials specific to Maryland have been produced and distributed for consumers as part of this program. With more than 15 FFV stations in Maryland offering this fuel choice, maintaining a vibrant ethanol program in Maryland benefits the state’s economy through lower fuel costs and an improved environment, while bolstering the market for rural agricultural products.



The National FFV Awareness Campaign is a program of the Clean Fuels Foundation and is supported by the U.S. Environmental Protection Agency and U.S. Department of Agriculture. In addition to the Maryland Grain Producers Utilization Board, CFDC is partnering with other organizations to support and endorse this program, including government entities such as the Governors’ Biofuels Coalition and Nebraska Ethanol Board; private industry such as Chrysler, ICM, Monsanto, and Iogen; national non-government organizations like Growth Energy, the '25 x '25 Alliance and American Council for Renewable Energy; state groups like Virginia Clean Cities, Texas Clean Cities, and the Florida Bioenergy Association; and a host of other stakeholder organizations.

Grant: 2013-\$19,250

Market Development

E85 MARKETING AND INFRASTRUCTURE DEVELOPMENT

SUSTAINABLE ENERGY STRATEGIES, INC.
www.sesi-online.com

This year’s E85 infrastructure and development efforts were a huge success. Sustainable Energy Strategies, Inc. (SESI) was able to continue work with key partners to increase E85 infrastructure and promote ethanol throughout the Mid-Atlantic region. Five new E85 stations were installed, two in Maryland and three in Virginia.

SESI raised \$15,000 for a public relations campaign. SESI also coordinated the campaign which included radio advertising, direct marketing to 12,000 FlexFuel vehicle owners, the generation of flyers and station banners, vehicle displays and the coordination of speakers. The campaign centered around a Mid-Atlantic Petroleum Properties station grand opening in Potomac, Maryland on November 6, 2013.

These efforts had an impact. E85 retail stations reported a 22 percent growth in sales, selling an estimated 717,000 gallons compared to 586,600 gallons in 2012. Even more impressive, regional fuel marketers estimate E85 sales climbed to 1.4 million gallons, a 40 percent increase. Government Services Administration reported Andrews Airport Base E85 sales were approximately 203,000 gallons and Ft. Belvoir sales were 107,000 gallons. Lower prices for E85 fuels later in the year had a significant impact on E85 sales volumes.

Grants: 2013-\$27,312; 2014-\$34,662

U.S. GRAINS COUNCIL

www.grains.org
Chip Councill, Talbot County, serves as the Maryland Director on the Board of the U.S. Grains Council

In just a decade, the global middle class is expected to expand by more than 170 percent and grow to 4.9 billion people by the year 2030. At that time, Asia will represent two-thirds of the global middle-class population and 59 percent of the middle class consumption. Opportunities are growing for this market share and so is the competition. In the puzzle of the global environment, the partnership between the Maryland Grain Producers Utilization Board and the U.S. Grains Council plays a key role in fostering global economic development, enhancing food security of nations around the world, and sustaining and growing the profitability of U.S. agriculture.

The Council recognizes that long-term trade relationships are based on mutual advantage, partnership and trust. As a trusted bridge between international customers and U.S. agriculture, the Council’s in-market presence opens doors, builds relations and strengthens access to global markets for U.S. producers. Domestic exports have rebounded from the worst drought in decades to reach a record-breaking value of \$140.9 billion in fiscal year 2013.

The Council’s international staff, based in nine international offices with representation in an additional 16 countries, understands market trends and opportunities in their regions. Council staff work tirelessly to promote U.S. feed grains and co-products to importers, end-users and key officials, which has helped U.S. agricultural exports rally. The Council’s global network in more than 50 countries is at the service of Maryland producers, giving them invaluable in-country presence.

Grants: 2013-\$70,000; 2014-\$75,000



U.S. GRAINS COUNCIL



Strength in Partners

NATIONAL ASSOCIATION OF WHEAT GROWERS

www.wheatworld.org

Eric Spates, Montgomery County, serves on the Board of Directors for the National Association of Wheat Growers.

The National Association of Wheat Growers (NAWG) continues to work with coalition partners to identify solutions to various Clean Water Act- and Clean Air Act-related issues being reviewed by the Environmental Protection Agency; in particular working to reverse the decision regarding pesticide application as a point source of pollution requiring a permit. NAWG worked with policy makers, USDA and the various states to ensure that a strong farm safety net remained in place in the farm bill. Additionally, NAWG will continue to monitor activity that would negatively affect a producer's ability to mitigate risk. NAWG continues its work to ensure a smooth introduction of biotechnology into wheat, as well as increasing capacity to provide a rapid response on evolving news stories to prepare states to respond to media and other inquiries. Examples include preparing talking points on various negative studies released on biotechnology and talking points and background information on biotech wheat field trials.

Designed to create a favorable environment for new wheat technologies, the Wheat Industry Alliance (WIA) strives to earn public trust by demonstrating that the industry is taking a responsible approach to the advancement of new technologies. With the assistance of communications partner Global Prairie, an array of materials were developed to assist stakeholders as they talk about innovation in wheat and prepare for issues and crisis management activities as needed. Other activities included hosting the annual NAWG/National Wheat Improvement Committee

research fly-in; responding to the discovery of unauthorized, genetically-modified wheat plants on a farm field in Oregon; educating Congressional contacts and newsletter readers about various safety net provisions; providing support for public wheat research funding; as well as monitoring regulations' effects on innovation in wheat and other issues, such as delays in deregulation of certain crops due to lengthy environmental reviews.

Grants: 2013-\$10,000; 2014-\$11,000



NATIONAL BARLEY GROWERS ASSOCIATION

www.nationalbarley.com

Bobby Hutchison, Talbot County, represents Maryland on the Barley Improvement Committee

Over the past year, the National Barley Growers Association (NBGA) has worked on a long-standing goal of separating barley Commodity Title support levels from corn in the new farm bill. Both the Price Loss Coverage Reference Price (\$4.95), and the Average Revenue Coverage Election, use malting barley values rather than feed or all barley values.

NBGA is also working with the Risk Management Agency on a new crop insurance policy for barley that, if approved, would allow growers to insure their barley for the appropriate prices relative to the type of barley (malting or feed) being produced on their farm.

Grants: 2013-\$1,860; 2014-\$1,860



U.S. WHEAT ASSOCIATES

www.uswheat.org

Jason Scott, Dorchester County, is the current Secretary-Treasurer of U.S. Wheat Associates.

U.S. Wheat Associates (USW) provides technical assistance, trade service activities, education and consumer promotion activities, and training to wheat buyers and wheat food manufacturers in more than 100 countries. USW helped increase soft red winter wheat (SRW) export sales in marketing year 2012/13 (June-May) to more than 20 percent, compared to 2011/12 (198 million bushels). At 227 million bushels in the first six months of the new marketing year, SRW sales are already about 15 percent more than total 2012/13 sales, valued at more than \$1.67 billion. Top SRW import markets in 2012/13 included Mexico, Egypt, Nigeria, the European Union and Turkey. China is a dominating new buyer in 2013/14. To achieve such results, USW relies heavily on wheat class performance data in its annual Crop Quality Report. USW uses funding from MGPIB, as well as goods and services, to gather and test SRW samples needed to complete this critical report.

The Association of Latin American Industrial Millers (ALIM) held its 31st annual conference in Lima, Peru in November. There were 379 participants attending the event from 30 countries. During the event, USW representatives had the opportunity to interact with millers from Latin America to discuss the milling industry situation, to inform them about wheat available from the US in terms of price, freight and loading ports, and to promote the different classes of US wheat. It also provided a forum to discuss matters related to the development of the milling industry in the region and cooperation on areas of common interest. This grant helped support a reception which was well attended and helped USW maintain a visible presence with some of the world's largest SRW importing markets.

Grants: 2013-\$42,100; 2014- \$38,800



NATIONAL CORN GROWERS ASSOCIATION

www.ncga.com

Chip Bowling, Charles County, is the Vice-President of the National Corn Board.

In 2013, leaders of the National Corn Growers Association (NCGA) took the initiative in many ways. They stepped up to lead their industry, setting an NCGA membership record in August with 40,244 members. They worked tirelessly to meet the challenge of a growing demand, planting near-record acres and achieving a record crop despite less than favorable weather conditions in many parts of the country. They demonstrated they have both the ability and motivation to grow both crops and markets, using corn as a resource to help solve the needs of our nation and our world. NCGA also took the initiative, leading the industry and finding innovative ways to support the work done by U.S. corn farmers. NCGA fought for both a new, five-year farm bill and in defense of the Renewable Fuel Standard in the face of active adversaries. NCGA worked to build relationships across the value chain that will promote trade and the use of technology.

NCGA brought the story of American agriculture — the story of the farms, farmers and the incredible resource they provide our country — to consumers through programs like the American Ethanol program in partnership with NASCAR, the Corn Farmers Coalition, CommonGround, and the U.S. Farmers and Ranchers Alliance. The agriculture community faces an ongoing barrage of issues that could threaten markets, harm the agricultural safety net and the very ability to sensibly and sustainably farm. NCGA continually leads efforts to tackle these issues head-on, but it relies upon the strength of its grassroots, like Maryland farmers, to determine its priorities, its direction and then to vocally and actively support the initiatives that will help farmers reach common goals.

Grants: 2013-\$218,400; 2014-\$218,400





NCGA's National Corn Yield Contest has provided corn growers the opportunity to compete with their colleagues to grow the most corn per acre, helping feed and fuel the world. This has given participants not only the recognition they deserved, but the opportunity to learn from their peers. Two Maryland farmers placed in the national competition.

MGPUB & MGPA BOARDS
Regional Members

- Regional members serve on both boards*
 Kevin Anderson (Reg.1) 410-651-0022
 Bobby Guy (1) 410-546-9191
 Jim Saathoff (2) 410-634-2226
 Paul Spies (2) 410-829-2902
 Tom Gannon (3) 410-310-1957
 Marion Wilson (3) 410-758-1545
 Melvin Baile, Jr. (4) 410-848-3174
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 Syd Moreland (5) 301-884-3320
 Donnie Tennyson (5) 301-872-5612
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 USGC Director - Chip Councill
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- Administration**
 Lynne Hoot - Executive Director
 Lindsay Dodd - Program Assistant
 Marguerite Guare - Admin. Assistant
 Laurie Adelhardt - Public Relations
 410-956-5771 (voice)
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 lynnehoot@aol.com (email)
 www.marylandgrain.com
 MD Producers Utilization Board
 & MD Grain Producers Association
 53 Slama Road, Edgewater, MD 21037

Producer	Hybrid	Yield
IRRIGATED		
Willin Farms, LLC, Seaford	Channel 214-13VT2PRIB	280.8997
Bruce Bartz, Denton	DEKALB DKC61-88	278.6905
Clearview Farms Inc., Hurlock	DEKALB DKC62-98RIB	268.2856
NON-IRRIGATED		
My Ladys Manor, Monkton (<i>1st place national</i>)	Mid-Atlantic Seeds MA8102VT3P	302.2070
John Rigdon, Jarrettsville	Pioneer P0210HR	279.9432
Jan Appenzeller, Millington	DEKALB DKC62-08RIB	263.1288
NO-TILL / STRIP TILL IRRIGATED		
Tuckahoe Farms, Denton	DEKALB DKC62-97	277.6275
Redman Farms, Queen Anne	DEKALB DKC61-88RIB	272.4161
Michael Bostic, Church Hill	Pioneer P1319HR	243.0625
NO-TILL / STRIP TILL NON-IRRIGATED		
Harrison Rigdon, Jarrettsville (<i>3rd place national</i>)	Pioneer P1339XR	296.5488
My Ladys Manor, Monkton	Mid-Atlantic Seeds MA8154VT3P	266.8897
Pro-Farm Services, Queenstown	Seed Consultants SCS 1131 AMR	266.4787
Tuckahoe Farms, Denton	DEKALB DKC62-97	259.9397
Lippy Brothers Farms, Hampstead	Pioneer P2088AM	257.2473

The Maryland Grain Producers Association is a membership organization representing you.

MARYLAND GRAIN PRODUCERS ASSOCIATION MEMBER FORM
 Send form to MGPUB, 53 Slama Road, Edgewater, MD 21037
Please print or type

**WE ARE:
 the voice of grain
 producers in Annapolis –
 where numbers count!**

**WE ARE:
 members of a national
 grain network to make
 our mark in DC and
 around the world**

**WE ARE:
 You – the
 Maryland farmer**

If you are a grain producer, your membership is free! Your checkoff assessment will pay your MGPA dues. Just complete and return this form to MGPUB. If you have requested a refund during the last year, please include a grain sales receipt for at least \$125 (\$50 for one year membership) on which a refund has not been requested.

Questions? Contact Lynne Hoot at 410-956-5771 or send email to: lynnehoot@aol.com.

Name _____

Membership in (check one) Name Company

Farm/Company Name _____

Farmer Yes No

Spouse's Name _____

Email Address _____

Home Phone _____

Business Phone _____

Address _____

City/State/Zip _____

Total Farm Acres _____ In Corn _____

Wheat _____ Barley _____ Oats _____ Milo _____

Membership 3-years for \$125 New
 1-year for \$50 Renewal

GRAIN PRODUCERS: This is a partial refund form for grain checkoff to pay MGPA membership dues. I hereby certify that I am a bona fide grain producer and that I contribute a minimum of \$125 to the checkoff program in a 3-year period (or \$50 for 1-year)

NON-PRODUCERS: Check enclosed for membership fee

Signature _____ Date _____



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53 Slama Road
Edgewater MD 21037-1423

**Thursday,
July 24, 2014**



Queen Anne's 4-H Park
10:00 am—5:30 pm

Maryland
COMMODITY
Classic

- Emcee—Joanne Clendining, MPT Host
- Keynote Speaker—Trent Loos
- Wye Tours
- Checkoff Funded Exhibits
- Commercial Exhibits
- Hot Topic Updates
- Chicken & Pork BBQ and Crab Feast

Contact the MGPA office for details

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