

# Farm Notes

*February 2012*

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**CARROLL COUNTY AGRONOMY WINTER MEETING**

Once again the University of Maryland Extension Carroll County office is providing you a great opportunity to hear what the experts have to say at our field crops meeting at your Carroll County Extension office. This educational event is being held on Wednesday, **February 22, 2012, 10:00 a.m. - 2:30 p.m. Morning refreshments and lunch will be provided.**

This meeting will give you the opportunity to get the information you are looking for to make decisions for the 2012 crop season.

Presenters include: Dr. Bob Kratochvil, Extension Specialist, Department of Plant Sciences & Landscape Architecture, University of Maryland. Answers to Frequently Asked Questions About Cover Crops; Dr. Cerruti RR Hooks, Extension Specialist, Department of Entomology, University of Maryland; Research Updates on the Brown Marmorated Stink Bug and other Agronomic Crop Pests; Dr. Lauren Kolb, Department of Entomology, University of Maryland, Integrated Approach to Weed Management; Dr. Arvydas P. Grybauskas, Extension Pathologist, Department of Plant Sciences & Landscape Architecture, University of Maryland, Crop Disease Update; Dr. Frank J. Coale, Professor Environmental Science and Technology, University of Maryland, Managing High P Soils; Dr. Wesley Musser, Department of Agricultural and Resource Economics, University of Maryland, Understanding RMA; Mr. Bryan Harris, Maryland Department of Agriculture, Nutrient Management Regulation, Nutrient Management Update; Mr. Ed Crow, Maryland Department of Agriculture, Pesticide Regulation Section, Pesticide Update.

This is a great opportunity for you to get a complete crop production picture in one place at one time. **Please call the Carroll County Extension office at 410-386-2760 to pre-register and to choose your sandwich for lunch. Don't wait as seating is limited and will go quickly!**

## **2012 MARYLAND DAIRY CONVENTION**

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When: Saturday, February 25, 2012

Where: Frederick County Fairgrounds Building 9  
797 East Patrick Street, Frederick, MD



Program:

- 8:30 a.m.     **Registration/Trade Show Opens/Silent Auction/Continental Breakfast**  
9:30 a.m.     **Occupational and Safety Health Administration Audits and Dairy Safety**  
                Ron Jester, University of Delaware, Georgetown, DE  
10:00 a.m.    **Farm Vehicle Tags and Licensing**  
                John Rotz, Maryland State Highway Administration, Hanover, MD  
10:20 a.m.    **30-Minute Break/Visit Trade Show/Silent Auction**  
10:50 a.m.    **Managing Animal Patterns for Improved Cow Comfort and Profitability**  
                Paul Rapnicki, University of Minnesota, College of Veterinary Medicine, St. Paul, MN  
11:45 a.m.    **Business Meeting/Election of Directors/Dairies of Distinction/Scholarship Awards**  
                President Scott Youse, Oakland View Farms, Ridgely, MD  
12:15 p.m.    **Fried Chicken Lunch**  
1:15 p.m.     **Mid-Atlantic Dairy Association Update**  
2:00 p.m.     **Steps for Improved Dairy Quality Assurance of Milk and Dairy Beef**  
                Ernest Hovingh, Penn State University, University Park, PA  
2:30 p.m.     **Break and Special Concurrent Learning Sessions**  
                RFID, Management and Animal Traceability, George Cudoc, Dairy One, Ithaca, NY  
                Euthanasia for Dairy Animals, Matt Iager, Mid-MD Dairy Vets, Hagerstown, MD  
                Improving Meat Quality with Proper Treatment, Ernest Hovingh  
3:45 p.m.     **Adjourn**  
6:30 p.m.     **Milk Punch Reception**  
7:00 p.m.     **Maryland Dairy Shrine Dinner**  
                Milk Toast from Dairy Princess  
8:00 p.m.     **Maryland Dairy Shrine Annual Meeting and Awards Program**  
                Entertainment by Magician Roger Lindsay  
                Youth Awards, Dairy Shrine Awards, Silent Auction Winners

For more information contact the Maryland Dairy Industry Association, 23301 Mount Ephraim Road, Dickerson, MD 20842, 301-349-0750, [secretary@marylanddairyindustry.org](mailto:secretary@marylanddairyindustry.org)

*Source: MDIA*

## **FOOD FOR PROFIT CLASS IN FEBRUARY**

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Have you ever been told that your favorite homemade bread, or salsa, is “good enough to sell?” Do you have additional fruit or vegetables from your farm or home garden that you would like to make into a commercial product? Food for Profit is a one-day workshop designed to help you work through the maze of local and state regulations, food safety issues, and business management concepts that all must be considered in setting up a commercial food business. This session of Penn State Extension’s popular course is co-sponsored by the Maryland Rural Enterprise Development Center and University of Maryland Extension.

## **How Can Food for Profit Help Me?**

Food for Profit will take you step-by-step through the entrepreneurial process. It will provide you with the information and skills to assess if your idea will be something that will sell at a profit. Conducting a feasibility study (to see if yours is a good business idea), performing marketing research, and beginning to draft a business plan are a few of the concrete tools taught by certified instructors and business experts. By attending this class, you can learn how to evaluate the opportunities on paper before you look for funding or take action (saving money and time).

### **Registration Information:**

Food for Profit will meet from 9:00 am to 4:00 pm., on February 28, 2012 at the Washington County Agricultural Education Center, 7303 Sharpsburg Pike (building door #4), Boonsboro, MD, 21713, The tuition cost of \$40 per person includes all materials and lunch. Registration is through the Penn State event on-line system at <http://extension.psu.edu/events> (scroll down to February 28, 2012 listings) or by calling 877-489-1398. For further information about workshop content, contact Extension Educator Winifred McGee, [wml1@psu.edu](mailto:wml1@psu.edu), 717-270-4391 or Ginger S. Myers, University of Maryland Extension Specialist at [gsmyers@umd.edu](mailto:gsmyers@umd.edu), 301-432-2767 x338. Pre-payment and registration are required for this workshop. Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

*Source: MREDC/UME*

## **2012 DIRECT AND COUNTER-CYCLICAL PROGRAM (DCP) AND THE AVERAGE CROP REVENUE ELECTION PROGRAM (ACRE)**

Enrollment for the 2012 Direct and Counter-cyclical Program (DCP) and the Average Crop Revenue Election Program (ACRE) began on Jan. 23, 2012. The last day for producers to sign up for either program will be June 1, 2012.

For more information go to: [www.fsa.usda.gov/dcp](http://www.fsa.usda.gov/dcp) or [www.eauth.egov.usda.gov](http://www.eauth.egov.usda.gov) .

*Source: USDA*

## **CARROLL COUNTY AGRICULTURAL LAND PRESERVATION PROGRAM**

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The Carroll County Agricultural Land Preservation Program has announced it is accepting new applications from landowners for the sale of agricultural land conservation easements now through April 17. Applications are available by calling 410 386-2214 or by visiting the Carroll County Government website at <http://ccgovernment.carr.org/ccg>. Click on the "Government" tab and scroll to "Agencies A-D" to find Agricultural Preservation.

*Source: Carroll County Government*

## **USDA ANNOUNCES GREATER FLEXIBILITY AND ADDITIONAL TOOLS FOR BEGINNING FARMERS AND RANCHERS**

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A new rule that expands loan opportunities for beginning and socially disadvantaged farmers and ranchers, while also establishing a new Land Contract Guarantee Program was recently approved.

More information on the new Land Contract Guarantee Program and the other changes are available at local FSA offices nationwide. Information about Farm Loan Programs and FSA loan qualifications can be found at [www.fsa.usda.gov](http://www.fsa.usda.gov).

*Source: USDA*

## **WINTER 2012 ISSUE OF WILD & WOOLLY**

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The Winter 2012 issue of Wild & Woolly, the MD Sheep/Goat Producer quarterly newsletter, has been published to the web at <http://www.sheepandgoat.com/news/Winter2012.html> .

A printer-friendly PDF copy of the newsletter may be downloaded at <http://www.sheepandgoat.com/news/PDF/Winter2012.pdf> .

The newsletter will now be published in the months of January, April, July, and October.



*Source: Susan Schoenian, Sheep & Goat Specialist, UME- WMREC*

## **USDA ANNOUNCES CRP GENERAL SIGN-UP**

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The U.S. Department of Agriculture (USDA) will conduct a four-week Conservation Reserve Program (CRP) general signup, beginning on March 12 and ending on April 6.

CRP is a voluntary program available to agricultural producers to help them use environmentally sensitive land for conservation benefits. Producers enrolled in CRP plant long-term, resource-conserving covers to improve the quality of water, control soil erosion and develop wildlife habitat. In return, USDA provides participants with rental payments and cost-share assistance. Contract duration is between 10 and 15 years. Producers with expiring contracts and producers with environmentally sensitive land are encouraged to evaluate their options under CRP. Producers also are encouraged to look into CRP's other enrollment opportunities offered on a continuous, non-competitive, signup basis.

Offers for CRP contracts are ranked according to the Environmental Benefits Index (EBI). USDA's Farm Service Agency (FSA) collects data for each of the EBI factors based on the relative environmental benefits for the land offered. Each eligible offer is ranked in comparison to all other offers and selections made from that ranking. FSA uses the following EBI factors to assess the environmental benefits for the land offered:

- Wildlife habitat benefits resulting from covers on contract acreage;
- Water quality benefits from reduced erosion, runoff and leaching;
- On-farm benefits from reduced erosion;
- Benefits that will likely endure beyond the contract period;
- Air quality benefits from reduced wind erosion; and
- Cost.

For more information on CRP and other FSA programs, visit a local FSA service center or <http://www.fsa.usda.gov/>.

*Source: USDA*

## **WARM WINTER CREATES NEED TO MANAGE STORED GRAIN**

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Warm weather the first half of this winter has increased the potential for problems in stored grain.

Grain needs to be either dried or stored at a cool temperature to prevent mold growth. If the stored grain is dry, the warm winter temperatures will not cause storage problems. But if the grain is not dry, the warm temperatures may be a concern. The potential for insect problems also increases at warmer temperatures.

For example, cereal grain at 18 percent moisture content can be stored for up to about 200 days at 40 degrees and 90 days at 50 degrees, but only about 15 days at 80 degrees.

For each 10-degree increase in grain temperature, the allowable storage time is reduced by about one-half.

The allowable storage time increases at lower grain moisture contents. At 70 degrees, the allowable storage time increases from about 30 days for cereal grain at 18 percent moisture to 45 days at 17 percent moisture, 70 days at 16 percent moisture and 200 days at 14 percent moisture.

Insects are dormant below about 50 degrees, so keeping the grain temperature below 50 degrees if possible is important. If the grain temperature is kept below freezing during winter storage, insects can be killed.

The grain temperature near the bin wall and on the top surface depends both on the outdoor temperature and solar radiation. The amount of solar energy on the south wall of the bin will be two to three times as much on Feb. 21 as on June 21 due to the low solar angle. The amount of solar radiation on the bin roof is about three-fourth as much as during the summer.



Monitor the grain temperature, particularly near the south wall and near the grain surface, and periodically run the aeration system to keep the grain cool. The goal in northern states should be to keep the grain temperature at 20 to 30 degrees during the winter and in southern states to keep the grain temperature below 40 degrees or as cool as possible.

Check dry grain at least every two to three weeks as long as the grain is at winter storage temperature and at least every couple of weeks if it is warmer. Measure and record the grain temperature, watching for trends that indicate problems. Check the grain moisture content and examine the grain in several locations. Search for small changes that are indicators of potential problems. Collect a sample, warm it to room temperature and place the grain on a light-colored or white surface to look for insects.

Remember to verify that the moisture content measured by the meter has been adjusted for grain temperature. In addition, remember that moisture measurements of grain at temperatures below about 40 degrees are not accurate. Verify the accuracy of the measurement by warming the grain sample to room temperature in a sealed plastic bag before measuring the moisture content.

Bin vent screens have the potential to become iced over when fans are operating in temperatures near or below freezing. Leave a bin fill-hole or manhole unlatched as a pressure relief valve if the air is being pushed up through the grain. If humid air is being pulled in through bin vents at temperatures near freezing, provide an unscreened opening, such as the manhole, for the airflow.

Always remember safety when working around grain bins. Grain suffocation is likely if entering a bin while unloading. It only takes seconds to be engulfed in the grain. Never enter a grain bin without stopping the auger and using the 'lock-out/tag-out' procedures to secure it.

Also, a person can be instantly buried if bridging has occurred or a column of grain attached to the bin wall collapses.

To view a video on the hazards of grain entrapment, go to [www.youtube.com/watch](http://www.youtube.com/watch) or do a search for "grain bin safety video."

*Source: Ken Hellevang, North Dakota State University Extension Service grain drying expert, 701-231-7243, [kenneth.hellevang@ndsu.edu](mailto:kenneth.hellevang@ndsu.edu)*

## **ROLE OF ANIMAL WELFARE ON RISE IN EUROPE**

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A leading Danish food company told players from the Canadian pork industry attending the 2012 Banff Pork Seminar that the role of animal welfare is increasing in Europe, rapidly adding costs, increasing competitive disadvantage and in some cases creating opportunity.

Henrik Baekstrom Lauritsen of Tican, said an increasing media focus and consumer pressure is leading to new animal welfare legislation in many European countries. Likewise, a new European Union directive lays down new common legislation on pig welfare.

Tican is the second largest slaughterhouse in Denmark, marketing to approximately 40 countries around the world.

Denmark operates with five levels of welfare, each with progressively stricter standards, explained Lauritsen. Here's a snapshot of what is required under each.

Level 1: General Danish production. Stalls for dry sows are banned as of Jan. 1, 2013 (70% are already in loose housing). Rooting material must be supplied. Grower pigs must have cooling facilities, partly slatted flooring effective Jan. 1, 2015, and rooting material must be supplied.

Level 2: U.K. Welfare Production. Sows must be grouped from weaning to seven days prior to farrowing. Rooting material provided. Grower pigs need cooling facilities. Fully slatted floors are not allowed after Jan. 1, 2015, and rooting material must be provided.

Level 3: Freedom Foods. Group housing from weaning to seven days prior to farrowing. Sows must be able to move and turn during farrowing until weaning. Crates are not permitted. Grower pigs need lower stocking density, bedding, cooling facilities and no castration.

Level 4: Free Range. Farrowing sows are held outside in huts with 1,000 square meters of grassland. Minimum five weeks weaning. Dry sows and sows for service must be in groups with access to an outdoor area. Bedding must be provided. Grower pigs must have 30% more area than the general Danish production. Bedding and access to outdoor runs must be provided. No tail docking.

Level 5: Organic. Farrowing sows must be held outdoors in huts, with 1,200 square meters of grassland per sow. Minimum seven weeks of weaning. Sows for service must be in groups. During summer dry sows must be on grassland and during winter must be in groups with access to outdoor areas. Bedding and roughage must be provided. Grower pigs must have 3.5 times the space of the general Danish production. No tail docking. Minimum of 50% solid flooring. Bedding, access to outdoor runs with maximum of 50% covered by roof. Roughage is required and after 2014, no castration will be allowed.

These higher care standards add between \$4.15 to as high as \$180.30 to per animal production costs, said Lauritsen, and anywhere from \$5.75 to \$210.30 premium. The challenge is that countries that require higher welfare standards do not want to buy the whole carcass, meaning other parts must be sold to buyers where welfare is not an important selling point. That means losing competitive advantage in those markets.

The future is even more demanding, said Lauritsen. By 2013 all dry sows must be in loose housing and by 2020 all sows in the service unit must be loose, with no stalls allowed. A complete ban on castration will come into force in 2018 and the Danish government has set a goal of all farrowing sows in loose housing by 2030.

*Source: (1/20/2012) Feedstuffs FoodLink*

## **FEDERAL PREEMPTION AND ANIMAL REGULATION**

On January 23rd, the U.S. Supreme Court overturned California's rule that prohibited the slaughtering or selling of non-ambulatory ("downer") animals for human consumption, holding that the Federal Meat Inspection Act foreclosed additional rules implemented at the state level. The case, [\*National Meat Association v. Harris\*](#), pitted a trade association versus California's Attorney General—the state official charged with enforcing the statute. Although the litigation was confined to the scope of the Federal Meat Inspection Act (FMIA) in relation to the California rule, the Courts holding could apply to other state efforts to regulate animal welfare.

The Department of Agriculture's Food Safety and Inspection Service (FSIS) administers the FMIA and has promulgated multiple regulations over the years regarding the inspection of animals and meat, as well as other aspects of slaughterhouse operations. Under the FMIA regulations, animals that arrive at a federally inspected slaughterhouse are approved for slaughter or designated as condemned or suspect. Condemned animals must be

killed and kept out of the human food supply, but suspect animals, including non-ambulatory animals, are monitored and, at the discretion of the federal inspector, eventually may be approved for human consumption. California's law, codified at [section 599f of the Penal Code](#), however, prohibited the slaughtering or sale of a non-ambulatory animal for human consumption and required that slaughterhouses euthanize all non-ambulatory animals.

The National Meat Association challenged the California rule, asserting that the FMIA expressly preempted the state's regulation of animals presented for slaughter at a federally inspected slaughterhouse. The FMIA's preemption clause prohibits states from imposing any additional or different requirement concerning slaughterhouse facilities and operations that falls within the scope of the FMIA. [21 U.S.C. § 678](#). The FMIA also states, however, that it does not "preclude any State . . . from making [a] requirement or taking other action, consistent with [the FMIA], with respect to any other matters regulated under this Act."

The Supreme Court unanimously reversed the U.S. Court of Appeals for the Ninth Circuit's judgment that had upheld the California law. According to the Supreme Court, California imposed additional or different requirements on slaughterhouses. Under federal law, a slaughterhouse may find a non-ambulatory animal fit for human consumption, but under California's law, a slaughterhouse must euthanize all non-ambulatory animals and exclude them from the human food supply. This discrepancy was the fatal flaw in the California "downer animal" rule.

Moving forward, and with respect to other state efforts at animal welfare regulation, the Supreme Court's decision has several ramifications. First it does not completely restrict the ability of states to regulate the type of animals that can be slaughtered for human consumption in federally inspected slaughterhouses. States can continue to create laws that prevent particular animals from being transported to slaughterhouses. For example, the Court explained the critical distinction between state laws prohibiting the slaughter of horses (such as the [Illinois Meat Act](#)) and California's prohibition on the slaughter of non-ambulatory animals. A ban on horse slaughter does not affect the daily activities of slaughterhouses because the law prevents horses from being transported to the slaughterhouse itself. California's ban on the slaughter of non-ambulatory animals functions differently. Because animals become nonambulatory in transit to or after arrival at a slaughterhouse, the ban affects the daily internal activities of slaughterhouses, and thus the FMIA, as they will continue to encounter non-ambulatory animals. California (or other states seeking to regulate downer animal slaughter), conceivably, could check for and remove non-ambulatory animals at an inspection station prior to the animal's arrival at a slaughterhouse.

From a political perspective, the *National Meat Association* case also illustrates a unique tension between many interest groups with traditional ties to federal regulation of industries due to a perception of higher/stricter rules that may eliminate a "race to the bottom" scenario, and industry/trade organizations who often favor devolution of authority to states to develop their own, more locally appropriate rules. The non-ambulatory animal rule reversed this traditional alignment. Equally interesting is the current joint effort between the Humane Society of the United States (HSUS) and the United Egg Producers to push for the passage of [H.R. 3798](#), the Egg Products Inspection Act Amendments of 2012. This bill would create a federal standard that requires using larger "enriched" caged housing systems that provide each egg-laying hen more space, creates uniform egg carton labeling requirements, prohibits excessive ammonia levels in henhouses, and prohibits the sale of eggs and egg products that do not meet the federal requirements. HSUS has been pushing similar legislation at the state level for a number of years, and was actively supportive of the California ballot measure (Proposition 2) that passed in 2008 and imposed [significant animal welfare standards for laying hens](#). Although the proposed Egg Products Inspection Act Amendments are less stringent than California's legislation, HSUS nonetheless is supporting the federal law, in-part, because the states that produce the most eggs (e.g., Iowa) are unlikely on their own to implement stricter state regulations along the California model. On the other hand, an industry group, such as the United Egg Producers, often would work to oppose federal regulation of the industry, but, in a scenario

similar to the scope federal preemption under the FMIA, a revised Egg Products Inspection Act could benefit the egg industry by creating a uniform standard that preempts development of a patchwork of state regulations that are more stringent than those currently imposed by federal law. Regardless of whether H.R. 3798 passes, tensions between federal and state rules and the issue of preemption, are likely to remain a hot topic in the animal agricultural context this year.

*Source: A. Bryan Endres and Megan R. Galey, Department of Agricultural and Consumer Economics, University of Illinois*

## **'EVER-GREEN' AG SYSTEM PROPOSED**

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A PANEL of international politicians recommended that governments and industry work to create a revamped agricultural system capable of sustainably meeting the demands of a growing world population.

That very different farming system will not come without controversy, but it will lead to the type of agricultural system necessary to feed the global population of 2050, when food demand jumps 70%, the panel said last week.

"Governments and international organizations should work to create a new green revolution -- an 'ever-green revolution' -- for the 21st century that aims to at least double productivity while drastically reducing resource use and avoiding further loss of biodiversity, topsoil loss and water depletion and contamination," the panel said in one of its central recommendations.

This would demand more investment in agricultural research, an end to subsidies for fossil fuels by 2020, more support for alternative fuels and changes in land tenure in areas where it is difficult for women to own farms.

The proposal comes from a 22-member international panel led by Finland's President Tarja Halonen and South Africa's President Jacob Zuma. The U.N. Secretary-General's High-Level Panel on Global Sustainability was established in 2010 to create a new blueprint for sustainable development. U.S. Ambassador to the U.N. Susan Rice was the U.S. delegate.

The proposal was delivered to U.N. Secretary-General Ban Ki-moon, who released the panel's report, "Resilient People, Resilient Planet: A Future Worth Choosing," on Jan. 30 in Addis Abba, Ethiopia.

The panel made 56 recommendations in its 99-page report.

Sustainable development is defined as development that meets the needs of today's population without compromising the ability of future generations to meet their own needs.

Observers said within 20 years, the globe will need 50% more food, 45% more energy and 30% more water.

The panel said the Green Revolution of the mid-1900s boosted food production, but at an indefensible cost. Farming became dependent on fossil fuels, which keep rising in price. Water was wasted.

With the population increasing and natural resources already stretched thin, the world can no longer afford today's agricultural practices, the panel warned.

Instead, the panel said the globe needs to "focus on sustainable intensification (practices with low external inputs, emissions and waste) and on crop diversification and resilience to climate change."

"New 'green' biotechnologies can play a valuable role in enabling farmers to adapt to climate change, improve resistance to pests, restore soil fertility and contribute to the diversification of the rural economy," the panel said.

A push for this ever-green agriculture will deliver lifesaving opportunities for the world's 2.5 billion rural farmers, particularly those on small farms with their "enormous untapped potential," the panel added.

This switch will demand more private and public investment in agriculture. Aid to farming has dropped 43% since 1985, but it recently has started to rebound, the panel said.

Ever-green agriculture also demands more and better use of extension and more money for research.

"A sustainable agricultural revolution will need renewed efforts to reduce barriers to international agricultural trade, in particular by concluding the (World Trade Organization's) Doha Development Round," the panel said.

The panel made other recommendations, including:

- \* Boosting support for renewable energy and ending subsidies on fossil fuels by 2020;
- \* Establishing price signals for consumption "that value sustainability to guide" consumer and industry demand because the world needs "more sustainable diets";
- \* New payment schemes to pay for water use, farming, etc., and
- \* Strengthening the role of science in decision-making.

In the letter transmitting the report to Ban, Halonen and Zuma accepted that "changing course will not be easy, but over time, we believe that following a more sustainable path will enhance human well-being, further global justice, strengthen gender equity and preserve the Earth's life-support systems for future generations."

Ban welcomed the panel's work, saying, "We need to chart a new, more sustainable course for the future -- one that strengthens equality and economic growth while protecting our planet."

A copy of the panel's report is available at [www.un.org/gsp](http://www.un.org/gsp).

*Source: Feedstuffs, Issue Date: February 6, 2012 | Issue 6 | Volume 84, By IAN ELLIOTT*

## **DO NOT IGNORE THE RESISTANCE THREAT FROM CORN ROOTWORMS TO Bt CORN VARIETIES**

You may have heard reports that for the past few years that farmers in Midwestern states have been encountering populations of western corn rootworm larvae that are resistant to varieties of Bt corn carrying the Cry3Bb1 toxin, the active ingredient against rootworms in YieldGard varieties. Thus far, this problem seems to be concentrated in five states: Illinois, Iowa, Minnesota, Nebraska, and South Dakota. Nevertheless, the problem is still relevant for Pennsylvania because we have fields in our region that share features with the problem areas in the Midwest. All problem fields were continuous corn for at least 4 years and used the same Bt toxin each year. And many, but not all, of the fields lacked appropriate refuge.

To learn from the experiences of our Midwestern counterparts and take steps to avoid similar problems here, I encourage Pennsylvania growers to be proactive and consider the following. First, all the problems in Midwestern fields occurred in continuous corn acreage, so an easy way to avoid problems would be to rotate

fields to soybeans or another crop. Pennsylvania does not have populations of rotational resistant rootworms—that is, rootworm beetles that lay their eggs in soybean fields rather than corn fields so the larvae emerge in first-year corn—and we do not expect them to arrive any time soon.

Second, if you do not want to rotate out of corn and want to continue using rootworm-active Bt hybrids, consider switching to Bt hybrids that express a different corn rootworm-active protein than the one you have been using, including possibly stacked hybrids with more than one protein active against rootworms. This will provide a different mode of action for the field and delay the possibility of resistance evolution. To check the traits and proteins in different types of Bt corn, check this [table](http://www.entomology.wisc.edu/cullenlab/publications/PDFs/Handy%20Bt%20Trait%20Table%20Mar%20%202011.pdf) produced by entomologists from University of Wisconsin and Michigan State:

<http://www.entomology.wisc.edu/cullenlab/publications/PDFs/Handy%20Bt%20Trait%20Table%20Mar%20%202011.pdf>

Third, if the previous options are not possible, consider applying a soil insecticide at planting, the way corn rootworms were controlled prior to the introduction of rootworm Bt events. Unfortunately, soil insecticides are an imperfect solution because their efficacy decreases with time and Bt varieties targeting rootworms seem to delay development further into summer.

Finally, ensure that your fields fully comply with refuge requirements. Planting of refuges is required to help prevent the evolution of resistance and not complying simply threatens the viability of the technology. Any of these approaches will help break the path toward resistance development. The bottom line is that relying on one tactic for too long is a prescription for evolution resistance—change up your approach to stay one step ahead of this important pest.

*Source: John Tooker, PSU Extension Entomology Specialist*

## **WINTER CARE FOR YOUR HORSE**

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Neglect is the worst thing that happens to the horse during the winter months. Most horses are turned out to pasture and we only see them in the dark at feeding time. In the summer months, it is easy to provide loving care for the horse, when we are riding every day and want to make certain the horse is fit and in good health.

About the worst thing for a horse during the winter months is ice; most importantly, the ice that covers the watering trough or water bucket. Water for the horse during cold weather is too often overlooked. The water may freeze, making it inaccessible to the horse. Mature horses need about 10 gallons of water a day. To keep the horse healthy during freezing weather owners should make sure an ample supply of fresh water is always available. Excessively cold water will decrease the horses' consumption of water.

Ideally, water should be maintained at a temperature of 40 degrees F. When the horse drinks less water, feed intake will decrease. A reduction in feed intake results in less energy being available to maintain body temperature and body weight during the cold months. Reduced feed and water intake could lead to colic and an impacted intestinal tract in the horse.

To help prevent water consumption problems in the winter, water should be made as accessible to the horse as possible. Heated waterers are one way to assure your horse an ample supply of drinking water. If electric water heaters are used, the water tank should be checked every day to insure that the heater is not shorting out and shocking the horse. An electric shock would prevent the horse from drinking.

The horse has two natural defenses against cold, a long hair coat and a layer of fat beneath the skin. Both provide an excellent means of insulation against the cold. The long winter hair coat serves as insulation by

reducing the loss of body heat and provides the first line of defense against the cold. Its insulating value is lost when the horse becomes wet and/or is covered with mud. This is why it is important to provide a dry sheltered area in cold wet weather and regular grooming. In damp weather, be alert for rain rot and other skin problems. If unchecked, rain rot can result in hair loss and irritation to the horse. It is very important to keep the horse from losing its hair coat and body weight and approaching an energy deficient state (the horse must be properly fed).

**Winter Feeding** - Most nutritional needs of the horse do not change during the winter season. Vitamin, mineral and protein requirements will still depend upon the horse's age and physiological status and not on the time of year. The horse should be fed according to body condition.

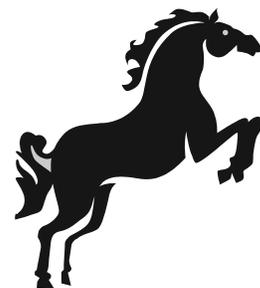
Thin horses should be fed some supplemental grain in addition to good quality hay to assure enough energy to produce warmth, while a fat horse will require little or no increase from their fall diet. Most mature horses that are idle and in good flesh can survive the winter quite well on good quality hay and ample clean water.

Horses will generally consume 1 to 1 ½ pounds of hay per 100 pounds of body weight and if needed ½ to 1½ pounds of grain per 100 lbs of body weight. If a horse is not maintaining good body condition or is performing some work, grain should be added to the diet. Roughage is digested in the cecum and colon by bacterial fermentation and a great deal of heat is produced in this process. If you must supplement your hay with grain, one of the safest of grains to feed is oats. However, corn contains twice as much energy as an equal volume of oats therefore a small amount of corn added to the diet will increase the energy supply.

Contrary to popular belief corn does not produce heat it produces energy that can later be converted to heat; it is the digestion of the hay that quickly produces the heat. However, for the thin horse, corn will provide the energy needed to keep the horse in good body condition and provides the energy needed for work. Cold weather is a real stress as the horse generates enough heat to provide body warmth during the coldest of weather. A horse's nutritive needs will be higher when it is minus 10 degrees Fahrenheit, than it will be when the temperatures are around 50 degrees.

Do not overfeed. Overfeeding can cause too much weight gain during the winter, and lead to laminitis and other health problems in the spring.

Vitamin and mineral requirements are a year-round concern. All horses should have access to trace mineralized salt to meet their electrolyte and trace mineral needs. Adequate levels of vitamins are present in sufficient amounts in good quality horse feed, especially in well-preserved green hay. However, if the hay appears brown, weathered and the hay quality is questionable, additional vitamin supplementation may be needed. A commercial vitamin mineral supplement can be used to provide what is missing from the hay.



**Winter Shelter** - While horses need shelter from cold winds, rain and snow; it is not necessary to keep them in a closed barn throughout the winter. Horses kept outdoors in the winter with access to a run-in shed, that opens away from the normal wind patterns, will generally have fewer respiratory disease problems than horses kept in poorly ventilated, heated barns. With a three-sided shed, the horse can take shelter during a rain or snowstorm and its insulating hair remains dry and fluffed. When the storm is over, the horse can emerge and be comfortable even though the mercury has drops below zero. Horses maintained in an enclosed barn should be exercised regularly, to maintain muscling and health.

Show horses with hair coats that are artificially short should not be turned outside in bitter winter cold without protection of a blanket or windbreak. If you do have a show horse that is housed in a barn during most of the winter, the barn should be adequately ventilated in order to reduce the risk of respiratory disease. Proper

ventilation eliminates excess moisture and condensation buildup. Care should be taken to also prevent a direct draft on the horse; this will cause stress and additional problems. Even in cold weather horses frequently prefer to be outdoors. The horse, when given the opportunity, will acclimate to cold temperatures without much difficulty.

**Other Winter Tips** - One important aspect of care that often is neglected is hoof care. Even though you are not regularly riding the horse, the hooves still grow during the winter months. In addition, the horse is traveling on uneven, frozen ground that can crack and break feet. Have the shoes removed and the hooves trimmed before turning the horse out for winter, and have the feet trimmed on a regular basis. This insures that when spring arrives, the horse will have sound hooves that will be capable of holding a shoe. Also, be on the alert for the presence of lice and mites. Parasites, both internal and external, can be heavily implicated by winter.

The important thing is, do not just turn horses out and forget about them. Every day at every feeding, your horse should receive at least a visual examination.

*Source: Ann Swinker, Extension Equine Specialist, PNST*

### **DATES TO REMEMBER**

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- February 17      **Penn State Webinar Series-Confidentiality, Liability and Legal Tangles**-10:30 to 11:30 am, Sign up at [www.surveymonkey.com/s/fridayfacilitatorforum](http://www.surveymonkey.com/s/fridayfacilitatorforum) or 888-373-7232
- February 22      **Agronomy Winter Meeting**-10 to 2:30 pm, Carroll County Extension Office, 700 Ag Center, Westminster MD Contact:410-386-2760
- Pesticide Applicator Recertification Class (Winter Crops Meeting)**-10 to 2:30 pm, Carroll County Extension Office, 700 Ag Center, Westminster MD Contact: 410-386-2760
- Nutrient Management Voucher Training (Winter Crops Meeting)**-10 to 2:30 pm, Carroll County Extension Office, 700 Ag Center, Westminster MD Contact: 410-386-2760
- February 25      **2012 Maryland Dairy Convention**- Frederick County Fairgrounds, Building #9, Frederick, MD
- February 28      **Estate Planning Web Conference**-9:30 to 12:30 pm, Library at Carroll County Extension Office, 700 Ag Center, Westminster MD 21157 Contact: 410-386-2760
- March 1            **Pasture Renovation & Maintenance Equine Short Course Series**-7 to 9 pm, Harford County Extension Office, 2335 Rock Spring Road, Forest Hill, MD Contact: 410-638-3255 or meagher@umd.edu
- March 6            **Estate Planning Web Conference**-9:30 to 12:30 pm, Library at Carroll County Extension Office, 700 Ag Center, Westminster MD 21157 Contact: 410-386-2760
- March 7            **Pesticide Applicator Optional Training**-10 to Noon, Carroll County Extension Office, 700 Ag Center, Westminster MD Contact: 410-386-2760
- March 8            **Pasture Renovation & Maintenance Equine Short Course Series**-7 to 9 pm, Harford County Extension Office, 2335 Rock Spring Road, Forest Hill, MD Contact: 410-638-3255 or meagher@umd.edu
- March 10          **Small Flock Poultry Workshop**-TBD
- March 13          **Estate Planning Web Conference**-9:30 to 12:30 pm, Library at Carroll County Extension Office, 700 Ag Center, Westminster MD 21157 Contact: 410-386-2760

- March 14                   **Pesticide Applicator Test**-10 to Noon, Carroll County Extension Office, 700 Ag Center, Westminster MD Contact: 410-386-2760
- March 15                   **Pasture Renovation & Maintenance Equine Short Course Series**-7 to 9 pm, Harford County Extension Office, 2335 Rock Spring Road, Forest Hill, MD Contact: 410-638-3255 or meagher@umd.edu
- March 24                   **Small Flock Poultry Workshop**-TBD
- March 31                   **Small Flock Poultry Workshop**-TBD

*Visit our web site at <http://carroll.umd.edu> For more event listings visit <http://www.agnr.umd.edu/AGNRCalendar/>*

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If you have a disability that requires special assistance for your participation in a program please contact the Carroll County Extension Office at 410-386-2760, Fax: 410-876-0132, two weeks prior to the program.

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by Maryland Extension is implied.



## **DECLARATORY RULING – 1-2010**

### Keeping of Domestic Animals as Pets

This interpretation applies to properties which do not qualify for Agricultural uses.

In all zoning districts, while there is no specific provision, it is reasonable to include the keeping of certain domestic animals as pets as an accessory use, “customarily incidental to any principal permitted use.”

In making this interpretation, it is important to determine what is “customary” in a particular zone or a particular neighborhood. For example, in a neighborhood of one acre or larger lots, one (1) goat, sheep, pot-bellied pig or similar sized animal may be equivalent to keeping a large dog, and the Code would allow as many as three (3) dogs. On lots of three (3) acres or larger in the Agricultural district, you may have as many goats, sheep, cows, or horses as you want. It would seem to be reasonable then to allow one (1) goat, sheep, pot-bellied pig, or similar sized animal on a lot of one (1) acre or larger, and up to three (3) goats, sheep or similar size animal on a lot of two (2) acres or more in a zone which does not qualify for Agricultural uses.

As to smaller animals, e.g. rabbits, chickens, ducks, or similar sized animals, the general practice is to allow up to six (6) rabbits, chickens, ducks, or similar sized animals, on lots of less than three (3) acres. The Code allows you to have up to three (3) dogs as personal pets, in any zone, and if six chickens are equal to one (1) goat or dog, then on lots less than one (1) acre, you may have up to six (6) chickens, rabbits, ducks, or similar sized animals. On lots of less than two (2) acres, you may have up to twelve (12) chickens, rabbits, ducks, or similar sized animals. On lots of less than three (3) acres, a maximum of eighteen (18) chickens, rabbits, ducks, or similar sized animals would be appropriate. On any lot greater than one (1) acre, a building permit would be needed for any structure housing animals, and the location would have to be in the rear yard of the lot and meet setbacks of seventy-five (75) feet from all property lines.

In a neighborhood of lots smaller than one acre, regardless of zone, the aforementioned large pets goats, sheep, pot bellied pigs, or other similar sized animals would be less appropriate and not allowed on lots smaller than one (1) acre.

With respect to smaller animals on lots less than one (1) acre, e.g. rabbits, chickens, ducks, or similar sized animals, the general practice has been to allow up to six (6), and limiting the size of the shelter to approximately the size of a large dog house. Given the limit in size, these structures would not be regulated as to location and would not require building permits.

It should be noted that the foregoing serves only as a guideline and that individual cases may result in different recommendations.

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Jay C. Voight  
Zoning Administrator  
July 1, 2010