

AGRICULTURAL NEWS

Chemung, Schuyler, and Steuben Counties

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Crazy 2011 Weather – Should We Blame Climate Change?

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There was nothing “normal” about the weather in the 2011 growing season. We started out with a tremendously wet spring, making planting vegetables and field crops challenging. Yet we had no frost at all in May, which is a nice change. Then we had a miserably hot, dry July, further stressing plants (and people!), followed by record-breaking rain in August and September. As of October 9th, the NASS reports that we are more than 26-inches of rain ahead of historical averages for Binghamton, NY, while Ithaca is more than 12-inches of rain over the average. Both cities are about 450 growing degree days ahead of historical averages for the season. The crazy season leaves some of us wondering if climate change is causing a new “normal” for NY weather, or if these seasons are still going to be anomalies.

The devastating Flood of 2011 was caused by the remnants of Tropical Storm Lee. Observations at Owego, Candor, and Waverly broke records for the amount of rain in a single day with 8.35, 6.11, and 8.00-inches, respectively. It was a 500-year event for Owego and Waverly, meaning that, on average, a storm of this magnitude will occur once every 500 years. It was a 100-year event for Candor. The tropical moisture brought historic rainfall, not only for 1-day totals, but also the week of the storm. Each of the three weather stations recorded over 10-inches that week, more than any other 7-day period for those stations. Other notable floods in Tioga County have been caused by a heavy rain event in September/October 2010, the remnants of Hurricane Ivan in September 2004, and the

remnants of Hurricane Agnes in June 1972. The all-too-recent Flood of 2006 was caused by tropical moisture combined with a stalled cold front.

NOAA’s Climate Prediction Center predicted the 2011 hurricane season to have more named storms and more major hurricanes than normal. These predictions don’t include the tracks of the storms or whether they will go inland, because that is determined by factors present at the time of the storm. It is also uncertain what effect climate change will have on hurricanes, so flooding caused by tropical storms specifically is not easily predicted.

However, the frequency of flood-producing precipitation events is expected to increase with climate change. Heavy rainfall events (more than 2-inches in 48 hours) have occurred more often in recent decades than in the early 20th century, and this trend is likely to continue under warming conditions.

continued on page 3

Cornell Cooperative Extension

Steuben County

Adjustments for Wheat Planted Late	Pg. 4
Subsurface (Tile) Drainage Best Management Practices	Pg. 5
Subsurface Tile Drainage Benefits and Installation Guidance	Pg. 7
Flowering Time Applications of Triazole Fungicides	
Reduce Vomitoxin Levels in Wheat	Pg. 9
Draft SGEIS/Public Hearing Dates	Pg. 10
Incentive Funding Available for Power Generation from Digester Biogas	Pg. 10
Earn A Cash Rebate and Help Reduce Energy Costs on your Farm	Pg. 11
USDA Has Emergency Loan Funds Available For Eligible Borrowers	Pg. 11
Beef Cattle Comments	Pg. 12
How to Field-dress a White-tailed Deer	Pg. 14
Precautions When Handling and Processing Deer And Other WildGame	Pg. 17

Trading Post

For Sale:

- Corestone silo 20 x 70
 - Harsh Mixer Stationary Mod 290/232bu with electronic scale, 41 auger, s.s. bottom
 - Brillion 10' seeder
 - 8 Boumatic Claws
 - Large quantity of J.D. 1 ¼ black plastic 160 psi
 - 20' Badger ring drive silo unloader
 - Plate cooler universal 81 plates expandable
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 - 25.4 ton feed bin Schuld model #90D12
 - Small square bale bedding chopper 8 hp engine
 - Calf supplies refractometer/dehorner butane/clostromoter
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- Call 607-857-4610 – Town of Chemung.

For Sale:

Hay – dry bales – 600 – 700 lbs.; balage – 700 – 800 lbs.; square bales – 35 lbs.; mulch hay for bedding (200 bales of 2010 hay). Call 607-566-2347, Dick Bossard, County Route 70, Howard, NY.

For Sale:

Heifer/Beef quality hay – 4 x 4 round. Also, **bedding** – 4 x 4 round and small squares. Call 607-566-8477.

For Rent:

Dairy Farm – Ideal for Jersey (or smaller breed) breeding operation. 38-tie stall barn w/pipeline milking system. Please call 607-776-1711.

Wanted:

Herdsmen for small (40 cow) registered Jersey (breeding) dairy set up for grazing. Partnership potential available. Please send resume to: Resume, P.O. Box 111, Kanona, NY 14856.

Coming Events

November 3 - Cornell Maple Program Webinar (Sugarbush Management), Maple production from healthy trees: principles and strategies for thinning your sugarbush. Maple producers depend on healthy and vigorously growing trees for high quality and high quantity sap. Cornell's Maple Program has worked at university facilities and with maple producers for several years on a sugarbush thinning applied research and extension project to assess the influence of thinning on tree growth and sap sugar concentrations. Join Dr. Peter Smallidge, NYS Extension Forester as he discusses how trees grow, why tree growth is important to maple production, how thinning affects growth and the relationship between thinning and sap sugar concentrations. Learn guidelines for decision making for when to thin and which trees to remove when managing a sugarbush. This webinar is pending for SAF CFE continuing education credits. Webinar connection details are available at <http://maple.dnr.cornell.edu/webinar.html> No registration is required. Webinars are presented on the first Thursday evening of the month at 7PM.

November 4 - Cover Crop Workshop and Tour, 9:15 a.m. - 3:30 p.m., Big Flats, NY. Cover Crop Workshop and Tour in Big Flats, NY on 11/4/11, hosted by the USDA-NRCS Plant Materials Program in cooperation with the Upper Susquehanna Coalition, Empire State Chapter Soil and Water Conservation Society and Cornell Cooperative Extension. Deadline for registration is 10/28/11.

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November 5 – Southern Tier Maple School, Tyrone Fire Hall, Route 226, Tyrone, NY, 9:15am to 12:30pm. Care and Management of the Sugarbush, Research Updates and Getting Ready for 2012, Grading and Filtering to Maximize Quality and Value. A \$5 donation at the door is appreciated to cover workshop costs. Pre-register

November 5 - Fall Hops Conference, Saturday, November 5, 8 am–5 pm at Brown's Brewing Company in Troy New York. The conference is for anyone interested in growing hops commercially.

The Northeast Hop Alliance annual meeting will be held at the conference. This is a great opportunity to meet growers, researchers and brewers and to learn about growing hops commercially in the Northeast. If you are growing hops or contemplating doing so, then you won't want to miss this event.

Please register before October 28th by visiting <http://nehopalliance.eventbrite.com> or check out the northeast hop alliance website at www.nehopalliance.org For more information on the conference contact Steve Miller at sgm6@cornell.edu or call 315 684-3001 x 127.

November 7 & 8 - Northeastern Silvopasture Conference, Watkins Glen Harbor Hotel, 16 N. Franklin Street, Watkins Glen, NY. A two-day conference devoted to sustainable woodland grazing in the Northeastern US. Learn how Silvopasturing can improve the health, performance and viability of livestock and forestry systems. Intended participants include: Conservation Professionals and Foresters, Graziers, Woodland Owners, Extension and University Faculty, Students, Ag Support Agency Personnel & Rural Community Development Advocates. The early registration rate is \$89 which covers conference meals (breakfast, lunch and breaks). The normal rate of \$129 will apply after October 23rd. The conference is sponsored by Cornell Cooperative Extension. Speakers are funded through the generosity of the conference partners. Space is limited, so please register early by visiting: <http://nesilvopasture.eventbrite.com> or call Schuyler CCE at 607-535-7161 for alternative registration.

November 7 & 17 - On-Farm Renewable Energy Generation Workshops. 10am – 2pm (Lunch - \$10). As part of the PRO-DAIRY Dairy Environmental Systems group anaerobic digester

workforce development project, we will be holding five workshops across the state targeted at extension professionals, county government officials, soil and water technicians, USDA Rural Development, and related participants. All workshops focus on presenting a basic overview of on-farm anaerobic digestion and energy utilization, in addition to providing on-farm digester system tours at nearby sites.

November 7th, Belleville Firehall (7981 State Rte 289 Belleville, NY) and Sheland Farm, Adams, NY, Workshop and tour of newly installed on-farm AD substrates lab.

November 17th, Synergy Farm (6534 Lemley Road, Wyoming, NY, Workshop and tour of newly installed vertical mixed AD system.

Registration is required for both these events, please contact Jenny Pronto at (jlpr67@cornell.edu)

December 1 - Group-Housed Dairy Calf Systems. A Symposium for Producers and Advisors, Doubletree Hotel, Syracuse Come join many of the 45 known NY and VT herds and their Veterinarians at the Group-Housed Dairy Calf Systems Symposium in Syracuse, NY. Eleven tours spread across New York State will follow the next week.

Newborn calves are infants and a social animal. While we cannot perfectly emulate the beef cow with her calf in a herd on pasture, we can mimic the critical number of feedings and social needs of these young bovines thanks to pioneering dairies that are making group housing work. Newer technologies such as autofeeders (robots), stabilized (acidified) milk self feeders, positive pressure directed ventilation and some promising negative pressure ventilation systems have allowed this advancement to flourish. Investment financial risk is minimized due to substantial labor savings with these systems. A broad range of housing options from retrofits to testing system in an older facility and migrating to a purposed new facility will be represented among the Producer Panel members.

For full details on the symposium agenda and tour sites please visit this website:

www.ansci.cornell.edu/prodairy/calfsystems

If you do not have web access, please contact your local CCE Ag Educator who can get all related information to you.

January 20, 2012 - NY Cattle Feeder's Conference and January 21, 2012 - NY Beef Producer's Winter Management Meeting, 2012, Both events will be held in Syracuse, NY. The Cattle Feeders conference will focus on technologies to enhance production and control market risk. The Winter Management meeting will focus on production practices along with how to interact with the consumer to present a beef friendly message.

For information on these meetings, contact Mike Baker, Cornell Beef Extension Specialist, 607-255-5923, mjb28@cornell.edu or Brenda Bippert, Executive Secretary, NY Beef Producer's Association, 716-902-4305, nybeefproducers@aol.com.

Continued from cover....

What about climate change can cause more heavy rainfall events? According to Dave Wolfe, professor in Cornell's Horticulture Department, rising ocean temperatures (and these are already being measured; they aren't just theoretical) mean that tropical storms are more likely to keep their strength as they travel northwards over the ocean. Warmer waters can evaporate more moisture into the air, so there is more moisture available to create a stronger storm. Additionally, warmer air can hold more water molecules. So, whether over land or ocean, warm air can hold more water vapor, which can condense into precipitation.

For communities along the coast, rising ocean levels are also a factor. Sea levels rise as polar ice melts, and as ocean temperatures rise in general (warm water expands). The ocean level at NYC harbor has risen about 16 inches in the last century. Higher ocean levels will mean that storm surges will likely reach further in-land than they have historically.

It cannot be determined if a single event, including the Flood of 2011, is a result of climate change. In a warming climate there is expected to be an increased probability of extreme rainfall events, but it is impossible to determine whether any particular storm would have occurred with or without climate change.

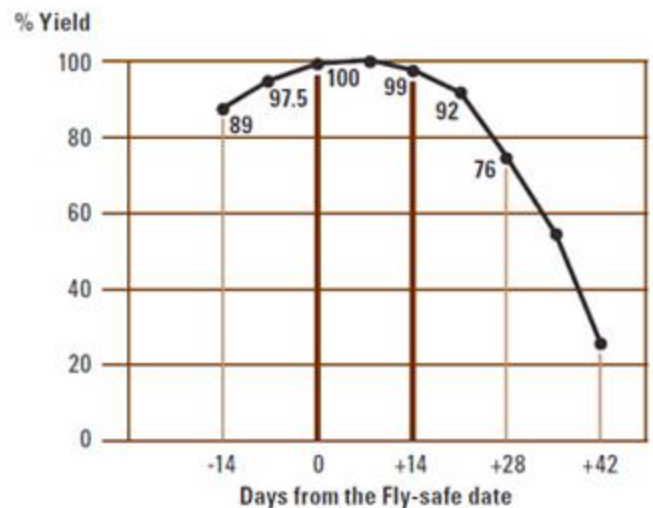
Editor's Note: Given recent weather extremes it seems prudent for farmers to think about what they

can do in their operations to minimize the negative effects of extreme weather. Give consideration to things like insurance coverage, crop diversity and rotations, using crop varieties with the best possible package of insect and disease resistances, drainage improvement (tile), tillage systems that can help to improve drainage, yet provide adequate erosion protection, cooling systems for dairy cattle, etc. In short, plan for the worst and hope for the best.

Adjustments for Wheat Planted Late

John Rowehl

Penn State Extension, York County



The optimum period for planting wheat is a two week period beginning with the Hessian fly-free date as shown in this graph (source: Improving Wheat Profitability- OSU). With the season behind normal, some wheat will end up being seeded after this. In that situation, here are some tips to help compensate for later planting.

Increase the seeding rate by 30 percent if later than the optimum seeding date. Planting rate during the optimum period is 1.2–1.5 M seeds/acre. If planting later, 1.6–2.0 M is the recommended range. As the days past the optimum date pass, increase toward the higher end of the range. Higher seeding rates compensate for the reduction in tillering from seeding late. Since seed varies in size, calculate the number of pounds per acre by dividing the target population by the number of seeds/pound and multiply by 1.15 to allow for germination and emergence loss. Or, calibrate your drill by the number of seeds per foot of row as shown in the following table.

Target stand (millions/acre) based on 85% emergence	Seeds per foot of row	
	7"	7.5"
	row	row
1.2	19	20
1.4	22	24
1.6	25	26
2.0	32	34

Seeding no-till in corn stalk residue may require an additional 15% increase in seeding rate to compensate under those conditions.

Maintaining proper seeding depth (1 to 1.5 inches) below the surface of the **soil, not the residue**, is critical to achieving good seed-to-soil contact and proper crown development. Shallow-planted wheat is more prone to winter injury.

Availability of potassium, and especially, phosphorus is very important. Phosphorus deficient plants do not tiller well and are more susceptible to winter kill. Here's where good soil test records come in handy. If test levels are optimum or less, fertilize with recommended rates. Normally a rate of 10 to 20 lbs of nitrogen per acre is recommended. Under late planting conditions, particularly in fields with little or no manure history, nitrogen rates at the higher end of the range help accelerate growth and stimulate tillering.

Editor's Note: John Wickham from Schuyler County observed that broadcast spreading of winter rye didn't emerge or have as nice of a stand, as compared to broadcast spreading following by the use of an Aerway. John credits the difference to better incorporation of the seed just as mentioned above.

Subsurface (Tile) Drainage Best Management Practices

Joe Lawrence, Quirine Ketterings, Karl Czymmek,

Steve Mahoney, Eric Young, Larry Geohring
Agronomy Fact Sheet 58

Cornell University Cooperative Extension

Introduction- Subsurface drainage (also referred to as artificial or tile drainage) is the practice of placing slotted drain tubes beneath the soil surface, well below tillage depth, to help lower the water

table of poorly drained fields and/or wet areas within fields. In agronomy fact sheet 57, benefits and guidance for installation of subsurface drainage are presented. In this fact sheet, we discuss currently recognized best management practices to reduce the risk of manure nutrients exiting tile lines.

Nutrient Loss through Preferential Flow - The main nutrients of concern are nitrogen (mainly nitrate-N) and phosphorus (P) although pathogens can also be a concern in some cases. Nitrate-N is water soluble and can be lost through leaching and runoff. Phosphorus is typically bonded to soil particles and can be lost when erosion occurs. However, a fraction of P is also water soluble and this dissolved P fraction can be lost through leaching and runoff as well. Installation of tile drains can reduce overland flow and hence reduce the loss of nutrients through runoff and erosion. When nutrient rich water is filtered through the soil, less N and P will exit the soil profile and enter the groundwater. However, when cracks in the soil and/or wormholes (called "macropores") create a direct link between the surface of the field and the tile lines (called "preferential flow"), nutrient losses can be large. There are no one-size-fits-all answers to dealing with preferential flow but there are some mitigation options that could be considered.

Mitigation Options

Nutrient loss through preferential flow is most likely to be an issue if manure is being spread within about 10 feet to either side of subsurface drainage lines and tiles are running. Currently, there is no application equipment that allows for manure application with the level of accuracy needed to avoid application directly over tile lines. In addition, the exact location of those tiles might not be known for older subsurface drainage systems.

Springwater Agricultural Products

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More practical approaches to addressing preferential flow include avoiding manure application when tiles are actively flowing and to increase soil-manure contact at the time of application. The latter can be done through either (partial) incorporation of the manure (as opposed to surface application without incorporation) or through the installation of water table control technologies. A promising approach that involves manure incorporation is to use aerators for (shallow) incorporation (Figure 1).



Figure 1: Incorporating manure with an aerator.

The aerator will break preferential flow patterns with minimal soil carbon loss, reduce N volatilization from the manure as compared to surface application, and reduce erosion risk (greater surface residue) as compared to chisel or moldboard plowing.

Management of the water table through control structures at drain outlets is also a promising approach to reducing the amount of nutrients that exit the tile lines. Research has shown that if water is stored in the soil (by plugging the outlet) for 7-10 days after manure application, much of the manure nutrients that would otherwise be lost can be retained in the soil. This practice requires installation and management of a water control structure on each outlet (Figure 2).



Figure 2: Installation of a water control structure.

Some new drainage systems for flat landscapes are being designed to reduce water flow through outlets with this in mind.

In addition to addressing the loss of manure nutrients into tile lines, capturing of the nutrients at the tile outlet could be effective. Several such approaches have been developed: (1) lining drainage ditches with gypsum, (2) inserting a highly absorptive material directly into the tile line, or (3) use of external “end-of-pipe” filters. All of these can help remove P from the tile discharge but additional work is needed to quantify effectiveness and economic feasibility of these approaches.

Practical Guidance

Some things to consider:

- *Installations of new tile*
When installing new tile, make sure the system is properly designed pattern drainage (typically parallel lines through the whole field). This has many benefits over random tiling to drain specific areas within a field. Contact your local Soil and Water Conservation District (SWCD) for guidance and additional information (http://www.nys-soilandwater.org/contacts/county_offices.html).
- *Timing and amount of nutrient applications*
Applying nutrients under good weather conditions and as close to crop uptake as possible improves nutrient uptake efficiency and reduces the risk of manure nutrient loss from fields during inclement weather.
- *Monitor the outflow during spreading events*
Be aware of tile outlet locations and check these outlets periodically, particularly during or after manure spreading and in times when heavy flow is likely. If manure is applied when outlets are flowing, check outlets often for turbidity or manure breakthrough and discontinue spreading if concerns arise. An emergency action plan should include actions to be taken if a discharge occurs. For new systems, place outlets where some filtration will occur and implement water control structures where possible.
- *Incorporate manure*
Tillage breaks up preferential flow pathways and mixes manure with the soil. It results in more filtering of water and sorption of nutrients as the water moves through the profile. Tillage does not have to mean intensive soil

disturbance; there are several reduced tillage options that provide the desired benefits with low soil disturbance. An example is the use of an aerator for shallow mixing of manure and soil. Aerator incorporation also has the benefits of N conservation and odor reduction.

Disclaimer

This fact sheet reflects the current (and past) authors' best effort to interpret a complex body of scientific research, and to translate this into practical management options. Following the guidance provided in this fact sheet does not assure compliance with any applicable law, rule, regulation or standard, or the achievement of particular discharge levels from agricultural land.

Subsurface Tile Drainage Benefits and Installation Guidance

Steve Mahoney, Joe Lawrence, Quirine Ketterings,

Karl Czymmek, Eric Young, Larry Geohring
Agronomy Fact Sheet 57
Cornell Cooperative Extension

Introduction

Subsurface tile or artificial drainage is the practice of placing slotted drain tubes beneath the soil surface well below tillage depth to help lower the water table of poorly drained fields and/or wet areas within fields. Though the concepts and benefits of artificial drainage are ancient, it continues to be an important crop production practice for modern agriculture and changes in input prices and crop values has made subsurface drainage an even more valuable investment.

While watersheds are very dynamic systems and research continues to improve understanding of the role of land use within a watershed, there is evidence that manure constituents can leach to subsurface drain lines if not properly managed. Fact sheet 58 addresses mitigation options to reduce the risk of loss of manure nutrients by leaching and transport through tile lines.

In this fact sheet we discuss the benefits of tile drainage for forage and grain crops and give practical guidance on tile drainage installation. It should be recognized that tile drainage is equally useful on vegetable and fruit farms, particularly apples, and protects the grower's large investment in expensive trees.

Benefits of Tile Drainage

The extent to which subsurface drainage benefits field crop production depends on soil type and varies with weather conditions in any given year. By helping convey subsurface water away from the field that would otherwise remain saturated for a longer period of time, tile drainage results in the following benefits:

- ❖ The soil surface dries more quickly and more uniformly (helping to reduce or eliminate wet areas), and soils warm up faster. This means that land preparation and planting can begin sooner.
- ❖ Crops can establish a deeper root system resulting in greater access to both soil nutrients and soil water, allowing for reduced sensitivity to both extreme wet and extreme dry conditions.
- ❖ Crop yield and forage quality increase compared to undrained conditions, as a result of better timing of crop establishment in the spring, improved growing conditions all year, and less weather-dependent harvest timing. Enhanced forage and grain crop production on the farm reduce the need for feed imports and this makes farms more environmentally sustainable as well.
- ❖ Tile drainage reduces overland flow and the loss of soil and nutrients through erosion and runoff.



Figure 1: Clean water exiting a modern tile drain.

When to Consider Tile Drainage?

Tile drainage is a good investment when the planting of crops is often delayed due to saturated soil conditions in early spring, where the harvest window is uncertain or erratic due to saturated conditions, and where yields are low, perhaps requiring forage to be purchased.

Accordingly, the greatest value per dollar spent on tile drainage is to tile-drain the worst-drained fields first. Farmer experience and soil survey information from the Natural Resources Conservation Service (NRCS) are the best resources for determining fields to tile drain.

Contracting

Contact your local Soil and Water Conservation District (SWCD) for a list of tile installation contractors and to request layout and design assistance. For addresses of New York State SWCD offices, access the following website: <http://www.nyacd.org/districts.html>.

As a general guideline, the cost of tile drainage is typically about \$1.00 per foot of tile, with actual price determined by the tiling intensity. Intensive tile installation may cost \$800 to \$1000 per acre.

Installation Guidelines

There are two common ways that modern subsurface drainage systems are installed. The most basic approach is placing a single random line to drain a specific wet area in a field. This often works well when most of the field is reasonably well-drained, but has isolated wet spots. When drainage is more consistently restricted across the field, the more complete and beneficial approach is to “pattern-drain” an entire field at regular intervals. Guidance for pattern drainage includes:

- Use 30 to 50 feet parallel pattern systems instead of single random lines to facilitate uniform drainage across a field and to reduce per foot installation costs. Tile is appropriate on flat lands as well as hillsides. Wider tile spacing is often used to reduce cost without sacrificing crop yield but soil type should be considered to determine the optimum spacing. Consult the New York State Drainage Guide (accessible at ftp://ftp-fc.sc.egov.usda.gov/NY/engineering_tools/drainage_guide_ny.pdf) for recommended tile spacing.
- Corrugated plastic drainage tubing, called “tile” after the original clay sections, should be installed deeper than the 2-foot minimum cover required by NRCS specifications; 4 to 4 ½ feet depth works well in the loam, sandy loam, silt loam, and clay loams of New York State as long as more restrictive, less permeable, soil layers are not encountered. The deeper depth is recommended because: (1) the tile line provides for a deeper rooting zone for growing crops; (2) water is filtered through more soil before it reaches the tile; (3) the tile is harder to reach with preferential flow through earthworm holes or cracks caused by dry weather; (4) the tile will not be harmed by sub-soiling practices; and (5) the tile is protected from damage by heavy field equipment. Placing tile deeper than 5 feet is not recommended for any of the New York State soil types.

Summary

In times of high crop prices and input costs, and heightened environmental concerns such as P runoff in overland flows, subsurface drainage is as important as ever. Farmers should consider running payback numbers for their farm fields and prioritizing the wettest fields for tile drainage installation for the greatest return on investment.

As more is understood about the movement of water and nutrients through the soil, research continues to determine the most effective and practical best management practices (BMP’s) to mitigate concerns that could otherwise limit the use of this effective and important practice for growing crops.

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Chemung, Schuyler, and Steuben – November 2011

COUNTRY CROSSROADS FEED AND SEEDS

***Custom Grinding
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Flowering Time Applications of Triazole Fungicides Reduce Vomitoxin Levels in Wheat

Gary C. Bergstrom and Katrina D. Waxman

Department of Plant Pathology and Plant-Microbe Biology, Cornell University

Vomitoxin (also known as deoxynivalenol or DON) is a toxin produced in wheat grain by the fungus *Fusarium graminearum*. This fungus infects wheat heads and causes the disease we know as *Fusarium* head blight (FHB). Even wheat heads without visible symptoms of FHB during the grain filling period can yield grain with significant levels of DON. Ingestion of DON at milligrams of toxin per kilogram (i.e., parts per million) of dietary intake can cause severe gastro-intestinal problems, including vomiting, in humans, dogs, cats, swine and other animals with simple stomachs. Ruminants and poultry are less sensitive to low amounts of DON. The United States Food and Drug Administration guidelines specify that wheat food products for human consumption should contain less than one part per million (ppm) of DON. To achieve this standard, flour mills routinely test every truckload of wheat for DON and in general only purchase wheat containing less than 2 ppm of DON. Development of FHB and contamination of grain by DON are very common in the humid production environments of the Northeast, but they are also highly variable from year to year and between locations/environments within a year (illustrated by data in [Table 1](#)). The level of DON in wheat grain is affected by many cropping and environmental factors, most notably by the persistence of surface moisture on heads from rainfall and dew during the period from flowering through soft dough stages of kernel development and by the inherent susceptibility of the wheat variety.

No wheat variety currently grown in our region has a high level of resistance to FHB and DON accumulation, so additional control measures such as triazole fungicides are needed for integrated management when conditions favor

disease and toxin. We have been evaluating registered triazole fungicides applied to wheat at the initiation of flowering (Feekes growth stage 10.5.1) for their effectiveness in reducing vomitoxin contamination to acceptable levels under a range of environmental conditions and with different varieties of wheat ([Table 1](#)). Two currently registered triazole products, Caramba SL (13.5 fl. oz. per acre, contains metconazole) and Prosaro SC (6.5 fl. oz. per acre, contains prothioconazole and tebuconazole) have shown excellent utility in lowering the levels of DON in grain.

Experience in New York and elsewhere suggests that these triazole fungicides are most effective when applied to a wheat variety, such as Truman, with a moderate level of resistance to both FHB and vomitoxin accumulation. Available designations of variety reaction to FHB (based primarily on disease symptoms) do not always fully reflect the potential for toxin contamination. Progress has been made in reducing the acreage of varieties such as Caledonia that are highly susceptible to

Table 1. Vomitoxin contamination level (parts per million) in winter wheat produced at the Musgrave Research Farm in Aurora, NY in replicated experimental plots sprayed at flowering (Feekes stage 10.5.1) with triazole fungicide or not treated. Triazole treatments were Caramba SL (13.5 fl. oz. per acre, contains metconazole) and Prosaro SC (6.5 fl. oz. per acre, contains prothioconazole and tebuconazole) applied according to product labels.

Year and experiment:	Variety >	Caledonia (SWW)	Jensen (SWW)	Richland (SWW)	Pioneer 25R47 (SRW)	Freedom (SRW)	Truman (SRW)
	<i>Fungicide:</i>						
2007 A	none	0.0	0.0	-	-	0.0	0.0
	Prosaro	0.0	0.0	-	-	0.0	0.0
2007 B	none	0.4	0.0	-	-	0.0	0.0
	Prosaro	0.1	0.0	-	-	0.0	0.0
2008 A	none	0.2	0.0	-	-	0.2	0.2
	Prosaro	0.1	0.0	-	-	0.1	0.2
2008 B	none	0.7	0.4	-	-	0.2	0.2
	Prosaro	0.1	0.2	-	-	0.2	0.1
2009 A	none	-	3.1	1.1	1.6	-	2.3
	Prosaro	-	1.3	1.6	1.2	-	0.7
2009 B	none	-	48.8	22.8	20.4	-	13.5
	Prosaro	-	26.4	19.5	10.1	-	12.6
2010 A	none	-	12.1	5.5	3.5	-	1.1
	Prosaro	-	2.0	1.4	0.5	-	0.2
	Caramba	-	4.2	2.0	0.8	-	0.3
2010 B	none	-	8.9	3.8	3.3	-	1.6
	Prosaro	-	2.7	1.7	0.6	-	0.3
	Caramba	-	3.8	1.9	0.8	-	0.5

disease and with very high potential for DON contamination. Many of our top-yielding varieties are at least moderately susceptible to FHB and toxin accumulation. A goal for the future is to produce high yielding varieties with increased resistance at the level of Truman or better. We are continuing our integrated management experiments with varieties and triazole fungicides and are awaiting DON data from our 2011 integrated experiments involving the red winter wheat varieties Otsego, Pioneer 25R47, SW 80, and Truman.

Caramba or Prosaro applied at flowering also protect flag leaves against leaf rust, leaf blotches, and powdery mildew during critical early grain filling stages. In summary, these materials are the current fungicides of choice for application at flowering for protecting wheat against foliar and head diseases while reducing the risk of vomitoxin contamination in grain.

Draft SGEIS/Public Hearing Dates

The draft Environmental Impact statement relating to drilling in the Marcellus shale was released last September. Below is the DEC website where the report can be found at <http://www.dec.ny.gov/energy/75370.html>

The DEC is now taking comments and will holding public hearings next month. The nearest locations are Dansville and Binghamton.

Date	Time	Location
11/16/2011	1:00 PM - 4:00 PM	Dansville Middle School Auditorium, 31 Clara Barton Street, Dansville, NY 14437
11/16/2011	6:00 PM - 9:00 PM	Dansville Middle School Auditorium, 31 Clara Barton Street, Dansville, NY 14437
11/17/2011	1:00 PM - 4:00 PM	The Forum Theatre, 236 Washington Street, Binghamton, NY 13901
11/17/2011	6:00 PM - 9:00 PM	The Forum Theatre, 236 Washington Street, Binghamton, NY 13901

Public Comment Period

Written comments will be accepted through **5:00 p.m. December 12, 2011** by two methods only:

- Electronic submission using a web-based comment form available on DEC's website (preferred method); or
- Paper submission mailed or delivered to: Attn: dSGEIS Comments, New York State Department of Environmental Conservation, 625 Broadway, Albany, NY 12233-6510. Please include the name, address, and affiliation (if any) of the commenter. Paper submissions also will be accepted at the public hearings listed below.

Due to the expected volume, comments that are faxed, telephoned, or emailed to the DEC will not be accepted for the official record. This is to ensure that all comments are captured properly and can be included during the review process. **Please use DEC's web-based comment form** to provide your input.

Incentive Funding Available for Power Generation from Digester Biogas

PON 2276

Renewable Portfolio Standard Customer-Sited Tier - Anaerobic Digester Gas-to-Electricity Program

The New York State Energy Research and Development Authority (NYSERDA) is accepting applications for financial incentives to support the purchase, installation and operation of Anaerobic Digester Gas-fueled Electric Power Generation Equipment in New York State. Capacity incentives of up to \$1,000 per kilowatt and production incentives of up to \$10 cents per kilowatt-hour are available. Funding is available on a first-come, first-served basis, and is limited to \$1,000,000 per site.

FOR TECHNICAL QUESTIONS PLEASE CONTACT: Tom Fiesinger Ext. 3218 or Kathleen OConnor Ext. 3422

FOR MORE INFORMATION PLEASE VISIT: http://nyserdan.gov/Funding-Opportunities/Current-Funding-Opportunities/PON-2276-Renewable-Portfolio-Standard-Customer-Sited-Tier-Anaerobic-Digester-Gas-Electricity-Program.aspx?sc_database=web

Earn A Cash Rebate And Help Reduce Energy Costs On Your Farm!

NYSEG and RG&E are working with EnSave, Inc., the leading designer and implementer of agricultural energy efficiency programs, to notify farmers of this opportunity and help guide you through the rebate process. Rebates are offered by NYSEG and RG&E.

Upgrading to energy efficient equipment will save you money on your energy bills. The NYSEG and RG&E Commercial and Industrial Rebate program reduces your initial cost, so new equipment pays for itself sooner. Now is the time to act to take advantage of these limited-time rebates. If you're not sure which upgrades are best for your farm, we can help calculate the savings and rebate potential of various options for you.

What equipment is eligible for rebates?

Rebates are available on a full range of energy-efficient electric or natural gas equipment, including:

- Energy efficient lighting
- Variable speed drives for your milking vacuum pump, milk pump, and other motors
- Heat recovery
- Boilers, furnaces and thermostats
- Plate coolers
- Circulation and ventilation fans
- Scroll compressors
- Grain dryers
- Chillers
- Other projects - ask if you qualify!

How much are the rebates? Rebates will depend on what type of energy efficient equipment you install.

- Lighting, furnaces and boilers, and HVAC will require a prescriptive rebate, where you are paid a pre-determined amount.
- Other equipment is eligible for a custom rebate, where we will provide a rebate based on a cost analysis of your project. The custom rebate will pay up to 50% of your incremental cost.

How do I get started? Call EnSave at **1.800.732.1399**, or send an e-mail message to **johnm@ensave.com**. EnSave will let you know whether your equipment qualifies, and how much of a rebate you can get. You will need to provide equipment quotes and an equipment invoice. A pre- and post-installation site inspection may be required. **This offer will only be available for a limited time, so contact us today!**

Chemung, Schuyler, and Steuben – November 2011

USDA Has Emergency Loan Funds Available For Eligible Borrowers

Bath – Doug Donner, Farm Loan Manager of USDA's Farm Service Agency in Bath reminded farmers to apply for their emergency loans ASAP. According to Donner, with the intermittent weather patterns that have occurred throughout the 2011 growing season, farmers may be eligible to receive emergency loans to help cover their production and physical losses.

Emergency loans may be made to farmers and ranchers who own or operate land located in a county declared by the President as a disaster area or designated by the Secretary of Agriculture as a disaster area, have an acceptable credit history, the ability to repay debt, and who have suffered at least a 30 percent loss in crop production or a physical loss to livestock, livestock products, real estate or chattel property. Emergency loan funds may be used to restore or replace essential property; pay all or part of production costs associated with the disaster year, pay essential family living expenses; reorganize the farming operation and; refinance certain debts.



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Lawn & Garden Supplies

“FSA is committed to providing family farmers with loans to meet their farm credit needs,” said Donner. “If you are having trouble getting the credit you need for your farm, or regularly borrow from FSA, emergency loans are available now.”

Donner suggested that prospective borrowers ask their lender about an FSA loan guarantee if you have had a setback and your lender is reluctant to extend or renew your loan. He added that most of FSA’s loan programs have special funding available for minority, female and beginning farmers.

“FSA employees will help you complete the necessary application and other forms, and help you understand what information is required, where to find it or who to contact to get it,” said Donner.

To find out more about FSA Emergency loans and other loan programs, contact your local FSA office. For the Bath office call 607-776-7398, ext. 2.

Beef Cattle Comments

Mike Baker, Beef Cattle Extension Specialist
Cornell University

January 20, 2012 NY Cattle Feeder’s Conference

January 21, 2012 NY Beef Producer’s Winter Management Meeting, 2012

Both events will be held in Syracuse, NY. The Cattle Feeders conference will focus on technologies to enhance production and control market risk. The Winter Management meeting will focus on production practices along with how to interact with the consumer to present a beef friendly message.

For information on these meetings, contact Mike Baker, Cornell Beef Extension Specialist, 607-255-5923, mjb28@cornell.edu or Brenda Bippert, Executive Secretary, NY Beef Producer’s Association, 716-902-4305, nybeefproducers@aol.com.

The Value Of Hay-How Much Can I Pay?

Along with record prices for beef cattle we’re seeing record prices for feedstuffs. I received a question the other day from a farmer who regularly purchased corn silage to feed his cows. The price of that had increased from \$25/t to \$65/ton. His question was can he afford the silage at \$65/t? I developed a spreadsheet that compares the price of corn silage, dried distillers grains and shelled corn to the value of hay at several energy levels measured as TDN. When feedstuffs were inexpensive as shown in the second column, it was not unusual to replace hay with corn silage or concentrates to stretch the hay supply. For example a low quality hay at 56% TDN was valued at \$53/ton compared to corn silage at \$25/ton. In other words several years ago, when you could buy corn silage for \$25/ton, the value of the 56% TDN was only \$53/ton. At today’s price of corn silage at \$65/t that same hay is worth \$137/t on an energy (TDN) basis. Likewise when corn was \$140/t, that 56% TDN hay was worth \$94/ton on a TDN basis. At this price, when hay was in short supply and expensive and you were faced with purchasing hay, it made more sense to replace some of that hay with corn grain to stretch the hay supply. At today’s price of \$285/t for corn grain, on an energy basis, you would have to pay more than \$192/ton for hay before you could replace it with corn. The bottom line is hay is worth a lot due to the price of our traditional energy sources.

Knowing the nutrient composition of your feedstuffs has never been more important. You can’t afford to feed high valued feedstuffs beyond the nutritional needs of the cattle, nor can you afford to supplement the herd if it is not needed. In some instances the price of hay is more than \$100/ton. If you know the nutritional value of the hay and you have an abundant supply, it may be a better financial decision to sell the extra hay.

		Corn silage, ton		
		\$ 25	\$ 45	\$ 65
Hay TDN, %	Hay value, \$/ton			
56	53	95	137	
58	54	98	142	
60	56	101	146	
62	58	105	151	
		DDG, ton		
		\$ 95	\$ 200	\$ 220
Hay TDN, %	Hay value, \$/ton			
56	68	143	157	
58	70	148	163	
60	73	153	168	
62	75	158	174	
		Corn grain, ton		
		\$ 140	\$ 265	\$ 285
Hay TDN, %	Hay value, \$/ton			
56	94	178	192	
58	98	185	199	
60	101	191	205	
62	104	197	212	

BQA UPDATE

BQA Program Expands to Level I and Level II BQA Certification

At the last meeting of the NYBQA Advisory Committee, it was decided to expand the New York Beef Quality Assurance program to offer two levels of BQA Certification. Completion of current BQA requirements will now be identified as **Level II Certification**. These requirements include:

1. Attend a classroom training or self study and complete BQA test
2. Attend a chute side training
3. Sign a BQA contract
4. Establish a Veterinary Client Patient Relationship (VCPR).

The **new Level I Certification** will consist of the first 3 requirements but will eliminate Chemung, Schuyler, and Steuben – November 2011

“Establish a Veterinary Client Patient Relationship (VCPR)”.

There are several reasons why a producer may not be able to establish a VCPR which led the committee to this decision. First, in NY, BQA is taught as part of the curriculum at three universities. Many of these students do not own cattle - therefore do not have a veterinarian, but intend to enter the cattle business after college. These students need to a form of certification to recognize their completion of the BQA training. Secondly, employees should be encouraged to become BQA certified but the veterinary relationship is normally established between the owner of the cattle or farm and the veterinarian. Also, in rare circumstances, professional veterinary services for cattle are not available.

The goal of BQA is to assure consumers that beef is safe, wholesome and raised with a concern for animal well being. To reach this goal, it is imperative that we reach any person that is currently or will be involved in the production of beef. For those not in a position to establish a VCPR or unable to do so, we can still offer and recognize their training on the principals of BQA. This in no way weakens our commitment to the goal of all producers working with a veterinarian; in fact only those that certify at Level II will be eligible to purchase a BQA Gate sign. This change however encourages BQA participation for all individuals working with cattle now or in the future.

If you have questions about the status of your certification and/or recertification, contact Carol Gills, NY Beef Industry Council, 315.339.6922, cgillis@nybeef.org.

BQA is a voluntary program focused on increasing the quality, taste and safety of beef. Certification demonstrates your commitment to the principles of BQA. To find out how you can participate, contact Mike Baker, Cornell Beef Extension Specialist, 607-255-5923, mjb28@cornell.edu or Carol Gillis, NY Beef Industry Council Executive Director, 800-292-6922, cgillis@nybeef.org.

TO/DO: Oct./Nov.

1. Consider marketing options for feeder cattle:
 - Special feeder calf sales, contact local sale barn for details
 - Retained Ownership, contact Mike Baker, 607-255-5923
2. Line up supplies for fall roundup and weaning. Consider the following:
 - Enroll your herd in the Cow Herd Appraisal Performance System (CHAPS) record keeping system. This program provides important data on the productivity of your cows based on the performance of their calves. Contact your local Cooperative Extension Agent, or call 607-255-5923.
 - Buy ear tags to identify replacement heifers and cows.
 - If deemed necessary (consult your veterinarian to do a fecal egg count) worm cows and bulls.
 - Apply lice and grub control before November 5.
 - Vaccinate calf crop for IBR, BVD, PI₃, BRSV, Pasteurella, Mannheimia, Clostridia spp., and Haemophilus somnus. If using a modified live vaccine, this must be done after calves are weaned. Killed vaccine products can be used on nursing calves.
 - Treat calves for worms and grubs and supplement with Selenium.
3. Pregnancy test and cull all open cows.
4. Cull problem cows and marginal producers. Production data is easily obtained using CHAPS.
5. Take forage sample for nutrient analysis. Depending on your locality, hay may be in short supply or of poor quality. Allocating the best feed to younger, higher producing animals will stretch out your supply. Contact local Cornell Cooperative Extension office for information.

6. Consider taking soil samples and top dressing fields requiring lime, phosphorous and/or potash.

How to Field-dress a White-tailed Deer

Step 1: Be prepared ahead of time

Before you leave your vehicle or campsite to go hunting, make sure you have the following materials with you:

- Kill tag with string already attached
- Flashlight
- Knife that has been recently sharpened
- Small rag (any color other than white) to wipe off hands
- Rope to tie legs and/or to drag the deer
- Blaze orange material to hang on a tree above the field-dressing site
- Several small pieces of string or twine
- Large plastic bag (self-sealing) for heart and/or liver.

Step 2: Get organized

Once you shoot a deer you may become very excited. You may forget important laws about the tagging of deer. Remember that handling a sharp knife requires attention and patience.

A. Approaching a downed deer.

Cautiously approach a downed deer from the side away from its legs. Be ready to discharge a finishing shot with your bow or firearm. However, do not do so unless absolutely necessary; some muscle contractions can be involuntary and may not be a sign that the deer is still alive. Look to see if there are any signs of chest movement from breathing, eye blinking, or quivering of muscles. If so, remain about ten feet away, ready to fire a finishing shot if the deer begins to get up, and wait for the deer to expire. You do NOT have to cut the

throat of the deer to drain blood. Normal field dressing procedures will “bleed out” the deer. Also, do not cut the scent glands from the legs of the deer; this may contaminate the meat.

B. Unload.

When you are sure the downed deer is dead, unload your firearm, un-nock and put your arrow away, or take the cap off the nipple of your muzzleloader. It is not safe to have loaded firearms and sharp broadheads in the vicinity of a field-dressing site.

C. Attach your kill tag securely on the deer.

D. Photograph your deer.

The best photos are often taken before field dressing your deer. In most cases, you may want to reposition the deer to be in the best light, make it look more “natural,” and/or be on clean ground or snow.

E. Move the deer to a nearby spot where you will be able to field dress the animal comfortably.

Place the deer on its back with its head uphill, if possible.

F. Hang something blaze orange on one of the nearby trees or above your head.

You may want to remove your hunting jacket to prevent getting blood on the sleeves (or to prevent overheating in warmer temperatures). In this case place your jacket on a limb of a nearby tree so other hunters can easily identify your location.

G. Organize your equipment.

Designate a specific area at the field-dressing site where you can monitor and easily locate your knife and other equipment.

H. RELAX!

Safety should be your highest priority while field-dressing a deer.

Step 3: Make an incision from the breastbone down to (but not through) the anus or vagina. Do not cut so deep that you slice into the internal Organs.

A. Locate the sternum (breastbone).

Insert your knife at the bottom of the sternum. Keep the blade edge pointing upward when making the first cut. (Although there are other methods to begin field-dressing, we recommend the initial incision be made at the breastbone to reduce the possibility of cutting internal organs.)

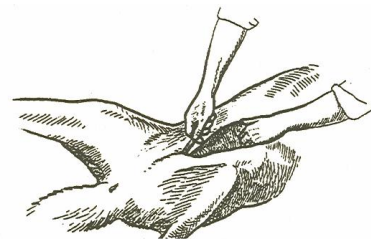


B. Cut through the abdominal wall (not just the skin and hide).

Keep the edge of the knife blade positioned upwards toward the hide (from the inside), not down toward the organs. Cutting upwards through the hide helps to prevent cutting the internal organs and aids in maintaining blade sharpness. Cutting downward through the deer’s hair quickly dulls a knife’s edge. Insert your index (second) and middle finger of your non-cutting hand into your original incision. Forming the shape of a “V” with these two fingers, gently pull up on the hide. Insert the blade into the incision between the two fingers, using it simultaneously as a guide for your knife and a way to keep your knife blade away from internal organs while cutting. Continue cutting to the penis of a buck or to the udder of a doe.

C. Cut around both sides of the penis and testicles or udder.

Be careful not to cut the urinary bladder, which will be removed in a later step. For bucks, Reach inside the body cavity and cut the base of the penis and testicles so they can be removed. For does, cut around both sides of the udder and remove it from the carcass. Check the udder for signs of



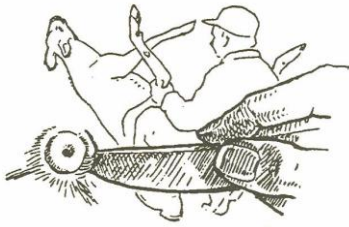
milk. This can be done by cutting through the fatty portion of the udder with your knife. If the doe has been lactating, milk will seep from the cut. DNR at a check station may ask you whether or not the doe was still lactating.

D. Cut deeply in a circular motion around the anus of a buck and the anus and vagina of a doe. The circle should be about two inches in diameter and your knife should be inserted about four inches deep, between the rectum and pelvic bone. **DO NOT** cut the rectum. Instead, pull it sideways in a circular motion, so you are cutting around the outside of it. If there are pellets or other fecal material present, you may want to tie the intestine in a knot above the rectum or use a piece of string to tie the rectum shut.



E. We do not recommend splitting the pelvis in the field.

Instead, push the tied-off rectal and reproductive tracts through the hole in the pelvis and toward the abdomen. Be careful that you do not puncture or burst the urinary bladder.



Step 4: Remove the urinary bladder And tract.

The bladder is a pear-shaped translucent sac in the lower abdomen that may or may not be filled with urine. Be especially careful in handling the bladder so that urine does not spill and taint the meat. Pinch off the bladder with one hand and slowly cut it free and remove it with the other hand. Another method is to use a piece of string to tie and then cut the urinary duct about an inch beyond the base of the bladder. Once the bladder and urinary tract is free,



place it some distance away from the carcass so that urine will not get on the meat.

Step 5: Roll the internal organs out of the abdominal cavity of the deer.

The carcass can now be rolled onto its side so the entrails will roll out onto the ground. Some cutting will be necessary to free the organs from the back of the deer and to cut the esophagus and blood vessels near the diaphragm. The esophagus should be pinched or tied off prior to cutting to prevent spilling stomach contents into the abdominal cavity. (Although there are other methods to remove internal organs, the DNR recommends that hunters first empty the abdominal cavity and then work to empty the chest cavity.)



Step 6: return to the upper part of the deer and cut through the edge of the diaphragm, where it meets the ribs.

A. Cut the diaphragm away from the ribs on both sides of the deer.

The diaphragm is a tough membranous muscle that separates the chest cavity (containing the heart and lungs) from the abdominal cavity (containing the intestines, four-chambered stomach, liver and other organs).

B. Reach into the chest with your hands. With your fingers forward, follow the esophagus as far as you can. Cut through the windpipe and esophagus as far up as you can reach.

Be sure to use care with your knife in this position. Without being able to see exact location of your hands and your knife, it can be very easy for you to accidentally cut yourself during this step. If you have no plans doing a taxidermy mount of your deer, you can first use your knife to cut the cartilage and hide along the breast bone before cutting the esophagus and windpipe.

C. Pull the windpipe downward, while cutting any attachments to the back of the carcass.

Roll the deer on its side to empty the heart and lungs from the chest cavity.

Step 7: Clean the body cavity.

Roll the deer carcass all the way over so that the opening to the body cavity can drain. However, don't contaminate the meat with dirt and debris. After a few minutes, roll the deer over on its back and remove any debris. The use of snow or water for cleaning the inside of the cavity is not recommended in most cases. Rinse out the body cavity with water or snow ONLY if the carcass has been tainted by contents of the digestive or urinary tracts. If this is done, dry the excess water in the cavity as quickly as possible.



Step 8: Remove the deer from the field.

A. Dragging a buck by pulling the antlers or a doe by pulling the front legs is acceptable for only short drags.

For moderate drags a rope may be used to tie the forelegs together and through the base of both antlers. Do not place the rope around the neck of the deer, especially if plan to have a taxidermy mount prepared. For long drags, deer should be placed on a plastic sled or taken out of the field on stretchers, poles, wheelbarrows, deer carts, ATVs, or other devices.

B. Don't forget the heart and liver.

These are excellent cuts of meat that many hunters leave in the field. If you do not have a plastic bag to carry these organs, place them inside the chest cavity for transport while carcass is being removed from the field.

C. Hang the deer in a shady area to drain the carcass and cool down the meat.

Most hunters hang their deer with the head up and the tail down. We recommend that

the animal be hung with the head down. Hang the deer high enough to be out of reach of animals and pets. Make sure that air is capable of circulating through the chest cavity to facilitate cooling. Some hunters use one or two sticks placed sideways in the chest cavity. It is not necessary to hang deer for much time other than to drain the blood. Bacterial growth increases when carcass temperatures reach above 40 degrees Fahrenheit and venison spoils quickly when ambient temperatures reach above 50 degrees Fahrenheit. **Aging and curing the meat is not necessary.**

Precautions When Handling and Processing Deer and Other Wild Game

Source: Michigan Department of Natural Resources

- Hunters should not handle or consume deer or other wild animals that appear sick or act abnormally, regardless of the cause.
- Always wear heavy rubber or latex gloves when field dressing deer or other wild game.
- Keep a separate set of tools to use only for butchering deer.
- If intestinal contents contact meat, consider the meat contaminated; cut off and discard affected area.
- Proper carcass care in the field is vital to preserving wild game. Big game animals should be field dressed immediately to cool the carcass and then hung by the head to allow the body cavity to drain thoroughly. In warm weather, carcass-cooling can be hastened and maintained with bags of ice. For big game animals, ice bags can be placed directly into the body cavity. Unlike venison, bear are marbled with fat and can spoil quickly at temperatures above 40 degrees. Venison can survive for several days at temperatures as high as 50 degrees as long as the carcass is kept out

of the sun and protected from flies. Placing the carcass into a cheesecloth game bag or applying a liberal application of black pepper to the body cavity will discourage fly contamination.

- Wash hands with soap and water before and after handling meat.
- Thoroughly clean equipment and work areas, then sanitize with a 50/50 solution of household chlorine bleach and water after processing. Wipe down counters and let them dry; soak knives for one hour.
- Dispose of the hide, brain and spinal cord, eyes, spleen, tonsils, bones and head in a landfill or your normal garbage pickup.

Safety Practices When Cooking Wild Game

The Michigan Department of Community Health recommends proper food-safety practices when cooking venison, as well as any other meat or poultry. Thoroughly cooking meat is important to reduce the likelihood of any bacterial disease. All meat, including venison, should be cooked until the meat is no longer pink and the juices run clear. If cooked according to the guidelines below, the likelihood of any disease transmission to individuals consuming this meat is extremely small.

Use a meat thermometer to cook meat to proper internal temperatures (minimum 165 degrees for all types of meat from ground or fresh venison, 170 degrees for the breast of game birds and waterfowl, and 180 degrees for the whole bird), which helps ensure harmful bacteria are killed and meat is not overcooked. The color of meat is an unreliable indicator of proper preparation.

For jerky, steam, boil or roast meat to 165 degrees Fahrenheit using a meat thermometer prior to dehydrating. Dry at 130-140 degrees Fahrenheit until thoroughly dry. Jerky is properly dried when it cracks on bending but doesn't break.

Fall Hops Conference Announced for November 5th

The Northeast Hop Alliance and the Cornell Agriculture Economic Development Program of Madison County announce the Fall Hops Conference to be held on Saturday November 5th at Brown's Brewing Company in Troy New York. The conference is for anyone interested in growing hops commercially. Tremendous growth in the microbrew industry has led to a renewal of hop production in the Eastern US, especially New York and New England. Consumers are looking for quality and variety in their beer choices and locally grown hops are helping to make those brews fantastic.

The Conference will include speakers from the Pacific Northwest and Eastern hop growing regions. Dr David Gent, a leading USDA plant pathologist from Corvallis Oregon, and Dr. Shaun Townsend, a hops researcher, from Oregon State University will share up to date information on disease management and horticultural practices for quality hop production, and harvesting. Dr Heather Darby from University of Vermont will speak about land preparation and fertility in the hopyard, and Chris Callahan of Callahan engineering will reveal his prototype for a small scale mobile hop harvester. Other speakers will include information on trellis design, the cost of getting started, pest management, an update on the Farm Brewery legislation in New York and more.

The Northeast Hop Alliance annual meeting will be held at the conference. This is a great opportunity to meet growers, researchers and brewers and to learn about growing hops commercially in the Northeast. If you are growing hops or contemplating doing so, then you won't want to miss this event.

The program will run from 8 am to 5 pm. There is a fee for the day which will include lunch. The event is sponsored by a USDA/NYS Specialty Crops block grant and a Northeast SARE Speaker grant.

Please register before October 28th by visiting <http://nehopalliance.eventbrite.com> or check out the northeast hop alliance website at www.nehopalliance.org For more information on the conference contact Steve Miller at sgm6@cornell.edu or call 315 684-3001 x 127.

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