Livestock 360°

Southeastern New York Cooperative Extension Livestock News

March 2014 (Volume 1, Issue 3)

County News and Updates 2-3

- CCE Orange County is Working with Partners to Help Improve Ag Labor Situation
- Agricultural District 30 Day Window Open April 1st through April 30th
- Patricia Claiborne to Serve as CCE Interim Director in Sullivan County
- Agriculture Manager's Breakfast at SUNY Ulster to Focus on Workplace Safety
- NYS DEC Pesticide Applicator Recertification Process
- Orange County 4-H Auction and Barbeque

Dairy and Beef 4-5

- Beef Calf Management after Birth
- When should I start spring grazing?
- What Affects Components of Milk?

Sheep and Goats 6

- Management Practices for Young Kids and Lambs

Crop and Feed Corner 7

- Reducing Feed"Shrink" to Grow Your Profit

Pigs and Poultry 8-9

- Raising Hogs on Pasture - Tips for Small Scale Hog Production
- Farrowing (Giving Birth) on Pasture

Marketing 9

- 2014 Calendar for holidays where lamb or goat meat is part of the traditional holiday feast

Livestock of the Month 10

- Raising Deer (and other Cervids) for Venison
- Chronic Wasting Disease

Upcoming Regional Trainings and Programs 11

Back Page 12

- Blast from the Past! Cornell Recommendations from 1951

Composting: an Alternative way to Manage Livestock and Equine Manure and Mortalities

Composting is a natural biological process of decomposition of organic materials. During the process, bacteria, fungi, and other microorganisms break down organic materials to a stable mixture called compost while consuming oxygen and releasing heat, water, and carbon dioxide (CO_2). Composting reduces the volume and nutrient level of the parent materials, and pathogens are destroyed if the process is controlled properly. Composting will generate little, if any, odor, flies, or other nuisances when managed properly. Therefore, composting can be an environmentally friendly method of manure and mortality management for livestock producers.

Compost produced on the farm can add to the bottom line of a farming operation by providing a high-quality soil amendment and a potentially profitable source of revenue if the compost is sold. An additional value for properly cured compost in livestock operations is its use as bedding.

To learn more about manure and mortality composting, attend the Southeastern New York Compost Workshop and Facility Tour! This two day educational program will be held on April 17 and 18 and will teach the ins and outs of manure and mortality composting for livestock and equine producers.

To register for the Composting Workshop, please visit www.cceulster.org and click on Registration Forms. Please pre-register by April 14. The cost is $20 per person/per day or both days for $35 per person which includes lunch for both days. More information can be obtained by calling Erin Campbell-Craven 845-340-3990 x327 or email eac266@cornell.edu.

Compost Workshop Agenda - April 17th – 9:00am to 4:00pm

- **What Makes Good Compost? Review of the Basics of Composting**
- **Review of the Basics of Composting**
- **Livestock and Horse Manure Composting**
- **Mortality Composting**
- **Compost Quality: Producing Compost for Various Markets**
- **Troubleshooting Common Compost Problems**

Tour - April 18th – 9:00am to 4:00pm

- **NYS Department of Transportation Field Office in Highland (Deer carcass composting)**
- **Continental Organics in New Windsor (Aquaponics and composting)**
- **Brey's Egg Farm in Jeffersonville (Poultry manure composting)**
- **Stone Wall Farms in Jeffersonville (Horse manure composting)**

This workshop series is a partnered program with Cornell Cooperative Extension of Ulster, Orange and Sullivan Counties, with content presented by the Cornell Waste Management Institute

Cornell University
Cooperative Extension
Livestock Education Progam
Sullivan, Orange and Ulster Counties

Orange County News

CCE Orange County is Working with Partners to Help Improve Ag Labor Situation.

For animal farmers securing consistent, reliable, legal workers might not be the biggest worry for your present or future. However, it probably is in the top five issues on most farms. In Orange County, because of the amount of diversified row crops, labor pressure is certainly at the top of the list. Because of that, CCE Orange County Ag Program Staff are working on a couple of avenues to help secure additional labor.

One avenue is accessing the refugee labor force. CCE Orange County has had initial conversations with a refugee agency from NYC who is interested in researching the possibility of building a new community here, near agriculture, potentially utilizing the Alamo community center as a "home-base". Of course, like all things it is complicated and there are a few hurdles to overcome. It will be a slow process and at first, we may only get a few workers, but it could be part of a long-term plan for a portion of the workforce. This may be an opportunity for animal farmers as the refugees would be most interested in year-round jobs with housing, and possibly housing for families.

The second opportunity that has arisen is the potential to work with BOCES students. Just this past week, career development folks have contacted growers and now CCE to develop a plan. For the most part, it seems these will be spring and summer jobs as something akin to internships (that they have to work to graduate) and that may roll into full-time summer jobs or more. Conversations are very much in the infancy stage here but you should be aware of the possibilities presenting themselves.

We will work hard to keep you "in-the-loop" for developments on all fronts. If you are particularly interested in one or both of these programs, please let Maire Ullrich, Agriculture Program Leader, know and she will include you on e-mail updates and or be sure you're included in further communications. She is best contacted by e-mail mru2@cornell.edu but if you want to chat please call the office at (845) 344-1234.

Sullivan County News

Agricultural District 30 Day Window Open April 1st through April 30th

Sullivan County is accepting applications from property owners seeking to be included in New York State Agricultural Districts 1 and 4, beginning April 1st and ending April 30th. Agricultural District 1 encompasses towns in northern and western Sullivan County, and Agricultural Distict 4 covers the County's eastern and southern towns. During this thirty day window, property owners may request inclusion of their land into the Agricultural Districts, explaining why their land should be included and providing their name, mailing address, telephone number, town and tax parcel numbers. Parcels to be included must be predominantly viable agricultural land.

Interested property owners may obtain an application by calling the County agriculture planner, Melinda Meddaugh, at the Sullivan County Division of Planning and Environmental Management at 845-807-0527 or by emailing melinda.meddaugh@co.sullivan.ny.us. Applications should be submitted to the Sullivan County Agricultural and Farmland Protection Board, in care of the Sullivan County Division of Planning and Environmental Management.

Patricia Claiborne to Serve as CCE Interim Director in Sullivan County

The Cornell Cooperative Extension (CCE) Sullivan County has announced the appointment of Patricia Claiborne of Middletown as interim executive director (ED) effective March 3. Claiborne is currently the interim ED for Cornell Cooperative Extension Rockland County.

"We are very fortunate to have someone of Pat's caliber and character step in so quickly," said CCE Board President, Joan Howard. "I am confident that her experience and knowledge will keep us focused and on track as we move forward with our programs and will help to ensure a smooth transition of leadership."

Ulster County News

Agriculture Manager's Breakfast at SUNY Ulster to Focus on Workplace Safety

Ulster County Community College's Department of Continuing and Professional Education, with support from CCE Ulster County, will present a safety overview for regional farmers on April 16 from 7-9am in the Howard C St. John Business Seminar Room on the UCCC Campus in Stone Ridge.

Designed for owners and managers, the morning's topics have been chosen to be of value to those who manage farms and supervise farm workers.

The discussion will provide an overview of livestock handling, farm vehicle safety, use of protective equipment with chainsaws, monitoring and mitigating the impacts of dangerous employee working conditions such as heat and cold stress, and allocating age-appropriate tasks for youth workers on farms.

The event is intended to raise awareness of the importance of providing farm workers with a safe and healthy workplace. Call (845) 687-5030 for pre-registration information.

NYS DEC Pesticide Applicator Recertification Process - *Maire Ullrich, CCE Orange County*

Obtaining and maintaining an NYS pesticide applicator's license is an administrative duty of farmers and sometimes the process changes. This artlcle is intended to serve as a reminder of the process and where to get more information.

Who needs a Pesticide Applicators license:

- Anyone who is planning on applying any restricted use pesticides to their crop.
- Anyone using ANY pesticides (restricted, general, or even OMRI approved) who has field workers.
- EPA requires Worker Protection Standard, training of field workers on farms where ANY pesticide is used. Training can only be conducted by certified applicators (or a few other specially trained folks). Requirements for WPS can be found at: http://www.epa.gov/pesticides/health/worker.htm

continued on page 4

Orange County 4-H Auction and Barbeque

Country style night of fun!
Saturday, May 11, 2013 at 7PM. Chicken Barbeque at 6PM

Orange County's 4-H Dairy Program is planning for their 2014 sale on May 11th. After many years this event has grown and continues to be a great fundraiser for the dairy program. As usual the program is looking for consignments of calves (particularly show-aged calves with correct type), bred heifers due near sale time, and breeding age heifers. Beside registered animals we welcome identified grades and all breeds of dairy cattle. We will also take consignments of other animals including: Turkeys, Chickens, Goats, Sheep, and Rabbits.

CCE Orange County will provide trucking for Dairy Cattle in Orange County plus handle sale preparation of the cattle once they arrive. It would be helpful if the animals came fairly clean, with their heads clipped and at least somewhat accustomed to a halter. All registration papers and transfers must be in order before sale time along with veterinary requirements. Jim Bergen has graciously once again offered us use of his barn. The commission for each animal consigned remains the same – anything from a minimum of 15% to a full 100% donation to support the Orange County 4-H Dairy Program.

The 4-H program is also planning to once again have their Chicken BBQ, reservation form to come, and are also looking for Silent Auction donations that will go to the highest bidder. If you are interested in consigning an animal or have a Silent Auction item please don't hesitate to call Jennifer Simpson at 344-1234 or email jks236@cornell.edu.

Beef Calf Management after Birth

At a minimum, all beef calves should have the following recorded as soon as possible after calving: an individual ID, their dam ID, and birth date. Especially in cases where the calving area is dirty or there is a risk of infection, the producer also may wish to trim the calf's navel to a length of about 2 inches and dip it in iodine or chlorhexidine to prevent bacteria from entering the bloodstream through the navel.

Producers should also be sure to observe whether the calf is nursing and being otherwise cared for by the cow – if not, they may need to supplement the calf with replacement colostrum. Colostrum, otherwise known as first milk, must be received within the first 6 hours of life and is a short-term source of antibodies necessary to protect the calf from disease while it develops a healthy immune system. Any calving or mothering difficulties should also be recorded so that these can be taken into consideration when making culling decisions later in the year on which cows and heifers to keep in the herd. A cow that has an especially long or difficult delivery or needs a great deal of assistance during calving may have damage to her reproductive system that will decrease her chances of successfully breeding back and calving in future.

When developing a calf vaccination program and schedule, producers should work closely with their veterinarian to determine which vaccinations may be necessary for their operation. A veterinarian may recommend that calves receive different vaccination based on the type of operation, location of the operation, and its management practices. Generally, for cattle herds that are considering expansion, the New York State Cattle Health Assurance Program recommends that calves receive the following:

- IBR/PI3 (Infectious Bovine Rhinotracheitis and Parainfluenza III)
- BVDV (Bovine Virus Diarrhea Virus)
- BRSV (Bovine Respiratory Syncytial Virus)
- Leptospirosis
- Clostridial

Producers should be sure to avoid vaccinating any beef calf in the rump, rounds, or other high-priced cut areas. Subcutaneous injections should be given in the neck in front of or behind the neck, and intramuscular injections should be given in the shoulder or neck.

For more information about vaccination and its role in herd health, go to https://ahdc.vet.cornell.edu/Sects/NYSCHAP/docs/vacc_facts111.pdf

When should I start spring grazing?

Hopefully, within the next month, temperatures in Southeastern New York will begin to rise and pastures will begin their spring growth. Especially after this extended winter season, it can be tempting to turn livestock onto pasture at the first sign of green; however, beginning the grazing season too early can stunt grass plants and have negative effects on pasture production that can last for the entire growing season.

Generally, experienced graziers recommend not allowing livestock onto spring pastures until the grass reaches 6-8 inches tall and the ground is dry enough to withstand hoof damage.

For more information on determining whether pastures are ready to graze, see http://www.ag.ndsu.edu/pubs/plantsci/hay/r1061.pdf

continued from page 3

What kinds of licenses are there?

For pesticide applicator's licenses there are 2 main categories: private for those who are applying chemicals to their own crop/property/rented land and commercial for those applying to someone else's property. Each of these has its own "categories" that specify the targets of applications that can be made under the license. Each also has its own requirements for recertification.

What's the difference between recertification and renewal?

Recertification is when you submit payment AND credits you have earned that total or exceed the required amount. Renewal is only when a fee is paid to maintain the license until recertification. If you do not recertify by your expiration date, you will need to get 6 "penalty credits" in addition to the credits required below. The penalty credits have to be earned after the date your certification expired. These credits can be core credits. Within 90 days of expiration, you have more options for recertifying than after 90 days has passed.

How many recertification credits are needed?

- To see how many credits are needed for recertification in a specific category visit www.dec.ny.gov/permits/41072.html.
- Core credits count for all categories, but 25% of the credits have to be specific to your category.
- All credits cannot be obtained in one calendar year, but must be spread over at least 2 years.

How are credits obtained?

- Recertification credits are earned by attending refresher courses throughout the 5-year period.

There is a "Course Calendar" on the World Wide Web. Using a web browser program, go to this address (http://coursecalendar.psur.cornell.edu/) and search the database of NYSDEC approved courses. There are also distance-learning opportunities to gain credits such as DVDs and on-line courses. If the required numbers of credits are not earned by recertification time, contact your Regional Pesticide Office for options to maintain your license.

You may NOT apply (or even possess) restricted use pesticides or supervise others without a valid ID card. If you have allowed your license to expire, contact the NYS DEC Region 3 office in New Paltz, NY at 845-256-3097 for further instructions. Renewing an expired license can take time so please DO NOT wait for cropping season to investigate your options.

What Affects Components of Milk?

Components of milk not only directly impact farm income but they serve as a guidelines to assess herd health and the overall nutrition program that is in place on the farm. Most marketing order now have a component pricing system that pays the producer based on milk fat, true protein, and other solids. The pricing system uses component values from manufactured dairy products, such as cheese, whey, and butter. We will discuss the variation of components, factors that cause those differences, and ways to improve components through herd management.

Shown in Table 1, different breeds of dairy cattle vary in component levels. Holsteins have the lowest fat and protein, while Jerseys have one of the higher. Remember, that Holstein produce the most milk out of all the breeds, averaging around 24,000 pounds, so their total yield of fat and protein will usually be higher.

Table 1

Breed	Fat %	Protein %
Ayrshire	3.86	3.18
Brown Swiss	4.04	3.38
Guernsey	4.51	3.37
Holstein	3.65	3.37
Jersey	4.6	3.59

The good news, if you are not meeting the average for your breed for components, is that it will be easier for you to improve. If your component levels are already average or above average, you can concentrate on increasing milk production so your total yields will increase as well. Although nutrition has a lot to do with milk yield and components, there are actually a few other factors as well.

1. **Stage of Lactation-**Components are higher in milk directly after freshening. After freshening components begin to decrease to their lowest point which is around 30 days and then they begin to increase again and peak at about 250 days in milk.
2. **Age-**As a cow gets older her components decrease due to the higher milk production and the prevalence of more infections that could happen in the udder.
3. **Seasons-**during the summer everyone can attest to their components dropping dramatically. They gradually increase during the fall, peak during the winter months, and then decrease through the spring. These changes can also be attributed to feed intake as well, which varies through the seasons.
4. **Mastitis-**Having mastitis will take a hit on your components and milk check all around. Values in both fat and protein decrease and SCC increases which could cause premiums to decrease.
5. **Genetics-**Protein and fat percentages have a higher heritability than yield of milk and component pounds.

Nutrition is the main factor that affects milk components. If there are problems in your components it will probably relate back to the ration or feeding practices. Because of this, fast changes can dramatically cause your components to change for better, or sometimes for worse. We are going to stay positive and only talk about increasing those components! Fat depression can be changed in 7 to 21 days, while protein can take 3-6 weeks. Milk fat can change from .1 to 1.0 percent in that time and milk protein can change up to .4 percent.

Remember that the environment can also affect components. Make sure that feed is constantly pushed up, there is no overcrowding, and you are feeding frequently enough, and make sure ration do not allow for slug feeding or sorting. These conditions can affect the cow and decrease the components. Poor ventilation and poor cow comfort can also severely affect components. Both of these reduce feed intake, but more of a problem they reduce laying time, which is where rumination occurs.

Monitoring your components should be at the top of every producers list. You will be able to develop a normal range for your particular farm and see when changes occur. When changes do occur you will be able to take a quick initiative in finding out what caused that drop. Remember that components account for money in your milk check!

Management Practices for Young Kids and Lambs

Once you have successfully made it through the birthing process for your sheep or goat herd, your work has not ended. Timely application of vaccinations, and management practices like disbudding and castration are critical for the health of your herd and for the welfare of your animals. If you are new to goat or sheep production, and are unsure about these practices, contact a vet, an experienced producer or your local extension office for assistance.

- Vaccinations

Based on the herd or flock's location and the producer's management practices, a veterinarian may recommend a number of vaccinations, but, even for closed and healthy herds, the CD-T vaccine is universally recommended. CD-T is a three-way vaccine that protects against Enterotoxemia type C (bloody scours), Enterotoxemia type D (pulpy kidney disease), and tetanus (lockjaw). All of these diseases can be fatal to lambs and kids. Pregnant does and ewes are generally vaccinated 2-4 weeks before birthing so that some antibodies for these diseases can be passed on to the newborn young through colostrum, which will provide protection for their first 2 months of life. Kids and lambs should be vaccinated for CD-T when they are 2 months old, with a booster given 2 weeks later.

- Disbudding

Disbudding, the removal of horn buds before they can grow into horns, is a common management practice for dairy goat kids. It is less common in meat goats but is still sometimes practiced when goats are housed where their horns may become stuck in feeders or fences. If kids are disbudded, the most common technique is to use an electric disbudding iron. For disbudding to be successful, the kids must be disbudded when their horn buds are still small enough to fit within the disbudding iron (less than ¾ inch in diameter). Although some sources recommend that disbudding be done when the kid is 1 to 2 weeks old, the horn buds of larger kids, especially buckling kids, may be too developed by the time the kid is a week old. In these cases, disbudding may need to be completed by the time the kid is 3-5 days old for it to be successful. The disbudding iron should also always be tested before use to make sure it is hot enough and the heat is evenly distributed through the tip of the iron – this can be done by holding the tip of the iron on a piece of wood for 8-15 seconds and observing that a dark, symmetrical burn ring is left on the wood.

- Castration

Male lambs and kids may or may not be castrated depending on whether they are intended to be marketed before they become sexually mature (at about 5-6 months) or are to be sold in ethnic markets, which generally prefer intact males. Intact males grow faster than castrated males, but they must be kept separate than females after 3 months, to prevent accidental early breeding.

Several techniques can be used to castrate lambs and kids: banding, surgical castration with a knife or scalpel, or use of a crushing tool such as a Burdizzo. Banding should be done before the lamb or kid is a week old to reduce the pain felt by the animal. Surgical castration should be done before the lamb or kid is 2 weeks old. It should not be performed during fly season and males should be turned out onto fresh, clean pasture after the procedure to prevent infection. A Burdizzo is preferable for use on males older than 2 weeks old and is used to crush each spermatic cord, cutting off blood flow to the testicles and causing them to atrophy.

When kids and lambs are castrated by banding or surgical methods they should be vaccinated against tetanus. If castration takes place before the kid or lamb is vaccinated for CD-T at 2 months, the kid or lamb can be protected against tetanus by giving the CD-T vaccination to the dam 2-4 weeks before birthing, or by giving the kid or lamb a tetanus anti-toxin at the time of castration.

When the elastrator technique is used for castration, it is very important that the lamb or kid be protected against tetanus, since the band creates an anaerobic environment that is conducive to the tetanus organism establishing itself in the tissue.

If the lamb or kid's mother was not vaccinated at least two weeks prior to lambing or her vaccination status is unknown, the tetanus anti-toxin should be administered to the lamb at the time of banding. The anti-toxin provides immediate short-term immunity whereas the tetanus toxoid, while longer lasting, takes 10 days to 2 weeks to elicit an immune response.

Reducing Feed"Shrink" to Grow Your Profit

Are feed costs getting you down? One of the best ways to save money on feed is to reduce loss or "shrink". Feed shrink is defined as the amount of feed delivered or raised on a farm that is not consumed by an animal. Below are some common sources of feed shrink on a farm and some strategies for reducing loss.

Handling and Storage

Take a look around your farm. Where do you see feedstuffs in places other than the bunk, mixer wagon or feed loader bucket? What is the price of the ingredients you see scattered on the road or mixed with the dirt? How much of your feed becomes dust in the wind? Dry ingredients with a small particle size and low density are the most affected by wind losses. The use of windbreaks around commodity sheds may also be helpful in reducing feed losses.

Birds and Rodents

Starlings may create a significant negative impact on feed cost. Starlings can consume up to 50 percent of their body weight in grain each day. A flock of several thousand birds represents a significant threat to your income. In addition, fecal contamination may pose a disease threat to pregnant and young animals. Fecal contamination may also reduce feed intake. Daily feed consumption is estimated at 0.0625 pounds per starling. Habitat management to reduce the impact of starlings includes reducing their access to feed and water. Starlings generally feed in the middle of the day. Reducing the amount of feed available in the bunks during the middle of the day can be helpful. Altering feed delivery so more feed is available during the evening and nighttime hours may help reduce losses. Lowering the water level in drinking troughs to more than 6 inches from the top of the water will prevent birds from drinking while perching on the rim, and maintaining a water depth of greater than 6 inches will prevent birds from standing and drinking.

Losses due to rodents may be due to several factors. Rodents are generally attracted to feeds with higher fat contents. Waste due to holes in bags or increased spoilage associated with holes in silage covers may be a greater concern than the actual consumption of feed. Rodent control around silage piles includes excellent weed control and in some cases may involve the utilization of fencing to keep rodents away from feed.

A comprehensive study conducted at the Michigan State University beef cattle teaching and research center examined the relationships among feeder design, animal behavior and hay waste. Twenty cows were allotted to one of eight pens with four feeder designs: cone, ring, trailer or cradle. Dry hay waste ranged from 3.5 to 14.6 percent for the various feeders. Feed losses were correlated positively with agonistic interactions (head butting and displacement of other cows) and feeder entrances. Cows feeding from the cradle feeder had nearly three times the agonistic interactions and four times the frequency of feeder entrances compared with cows feeding from the other feeder types.

This beef cow and forage-only study revealed that design features are important in reducing the amount of hay waste associated with feeding in round-bale feeders. The value of reducing hay waste from 30 to 10 percent for a 20-cow feeder (Buskirk 2003) for 200 days, with hay valued at $100 per ton, was estimated at $1,942 annually per feeder.

Resource:
D. D. Buskirk,et al. (2003) Large round bale feeder design affects hay utilization and beef cow behavior. Journal of Animal Science. 81:109-115. http://www.animal-science.org/content/81/1/109.full.pdf

In general, feed losses for dairy heifers will be less when fed in equipment designs that require the animals to place their head through and reach down for feed as opposed to simply reaching horizontally for feed. Feed wagons,where the feed is at the same horizontal plane as the animal's muzzle, have been demonstrated to increase feed losses.

Tossed and dropped hay and forage

Feed is an expensive toy. Cattle, in particular, tend to like to toss feed. Increased fly pressure will generally increase this activity. Some studies estimate feed loss is 2.5 percent less when headlocks are utilized as the feed barrier. This could amount to 3 pounds of per day or 1.5 pounds of dry matter per cow each day. Studies of round bale feeding systems indicate that using any feeder will reduce wasted feed from manure contamination and trampling by 20%-50% over using no feeder, and result in improved nutritional intake for animals. Some feeding systems were found to be more effective in reducing waste than others.

Resource:

Improving Profitability Through Feed Efficiency by Reducing Feed Bunk Losses, North Dakota State University AS1641 http://www.ag.ndsu.edu/pubs/ansci/dairy/as1641.pdf This publication is an excellent resource for dairy farmers.

Raising Hogs on Pasture - Tips for Small Scale Hog Production

Like all species, hogs evolved to survive in relationship to their environment. Hogs display a wide range of instinctive behaviors, such as rooting, foraging, nesting and wallowing. In order for hogs to be healthy and happy, they need to be raised in an environment that will allow them to express their natural behaviors. Hog producers benefit from better understanding the instinctive behaviors, nutritional needs and farrrowing capacities and limitations of hogs. Conventional managers raising hogs in controlled environments often seek to overcome ingrained behaviors. This strategy can cause animal discomfort and stress, which often leads to health problems that require further intervention and increase costs. Althought it is possible to create a confined space that mimics a natural environment enough to meet many of these instinctive needs, raising hogs on pasture is another strategy to achieve this goal. For many pastured-hog producers, quality of life for the hogs is a strong motivator in implementing a pasture-based production system. It just so happens that this method is also very cost-effective and very appealing to consumers. Small scale pastured-based hog producers will find that they can take advantage of niche markets while keeping animals healthy and costs low. Like other grazing systems, pastured hog production requires careful management.

Hog Behavior 101

Social structure is very important for hogs and they prefer to live in family groups. Within the family group, sows establish a hierarchy, which is based largely on age, size and aggressiveness. Maintaining sows in individual family groupings throughout stages of production will minimize stress and potential for confrontation. Careful monitoring is the best way to ensure healthy herd interaction. Sows have a strict social structure. We can understand much of what happens by knowing the dominant and submissive sows, and how they act. The dominant sow can usually be found in the gatekeeper position, closest to the waterer or feeder. The most submissive sow will farrow in the furthest corner. Every other sow fits between. Knowing something about the social ladder can help when deciding which sow of a twosome to move and which to leave, should a problem arise.

Hogs have the most elaborate nesting behavior of any farm animal and a sow will work for about five hours to build a nest before she farrows. If unable to do this, due to confinement or an absence of appropriate nesting material, a sow may delay parturition and/or display agitated behavior. Suitable space, a comfortable distance from other sows, and nesting materials, such as plenty of straw, should be provided to satisfy the maternal instinct to create a safe place for farrowing.

Allowing hogs to express rooting behavior is key to reducing daily stress levels. Pigs will start rooting the day they are born and through their lives, according to research, will spend about 51% of their time rooting. Access to pasture and/or deep bedding in farrowing huts will allow hogs to satisfy this instinct. If overstocked, rooting hogs may cause damage to permanent pasture, but the behavior can be managed to benefit the farm and the farmer. If confined in small paddocks hogs will clear land of prickly briars and bushes.

For hogs foraging is a social activity and when enough food is available all members of a group will eat at the same time. Grazing provides hogs with a wide range of appropriate foodstuffs and allows them to express this natural behavior.

Because of their thin hair cover and inability to sweat except through their mouths, hogs have a poor heat regulation system and are susceptible to overheating and sunburn when outside. Providing hogs with a mud wallow in the pasture helps keep animals cool, protects them from the sun and gets rid of external parasites. Outdoor wallows do increase exposure to internal parasites, however, so a holistic approach to parasite management that includes pasture rotation is recommended.

Feeding Pasture Raised Hogs

Over 50% of the total cost of raising hogs will be feed costs. Like all livestock, hogs need a diet with an appropriate balance of carbohydrates, fats, proteins, vitamins, minerals and water. Water is actually the largest requirement: for every pound of feed, hogs require 2-3 pound of water. Lack of water will significantly reduce intake and daily gain. Be sure that there are a sufficient number of waterers to avoid overcrowding. For other nutritional demands, conventional producers feed primarily corn and soybean meal—corn for energy and soybean meal for protein. However, these grains are not only expensive to produce, process, store and transport, but they are also nutritionally limited. Because hogs have high energy requirements and do not process fibrous forages as efficiently as ruminants, grass-based producers will not be able to get away from feeding energy concentrates entirely. However, stored corn and soybean meal are not the only options for energy. Small-scale hog

continued on back page

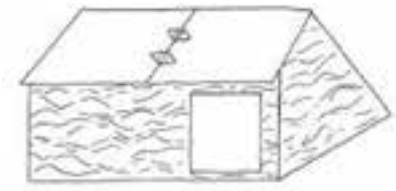
Calendar for holidays where lamb or goat meat is part of the traditional holiday feast[1]

1 From Cornell University Sheep and Goat Marketing Program http://www.sheepgoatmarketing.info/calendar.php

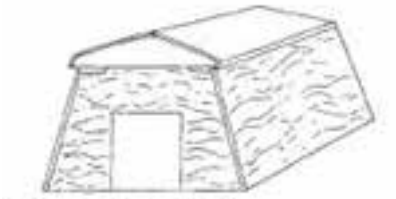
Farrowing (Giving Birth) on Pasture

Pastured hog producers work to keep stress levels low for sows, use deep bedding to buffer baby pigs, create a protected area where baby pigs can escape the sow and breed for sows with good mothering genetics to minimize loss.

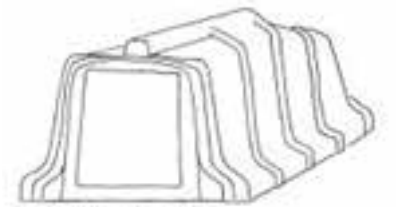
Farrowing (birthing) huts may be made of wood, metal, or plastic. They should have 45-60 sq ft of floor space and be placed approximately 50 feet apart in the pasture. Farrow on well-drained pasture, not bare ground, and move to fresh ground for each new litter to reduce transmission of disease and pests. Portable waterers and fencing are required for pasture farrowing. Place polywire at snout height with a strand above to prevent sows from stepping over. Huts should be also portable with no flooring and with an easy entrance and exit for sows and litter. They should be air-tight and draft-free with lots of dry bedding, especially in wet weather. Bed huts with small-grain straw, chopped or baled corn stalks straw or low quality grass hay.



Modified A-frame



Pig-saver (plywood)



Pig-saver (plastic)

English style (steel)

Passover (Pesach) starts at sundown: 2014 Apr 14th -Apr 22nd
Type of lamb wanted - 30-55 lbs, milk fed and fat.

Western Roman Easter: 2014 April 20th
Type of lamb wanted - 30-45 lbs live weight, milk fed and fat.
Type of goat wanted - Fleshy, milk fed kids with relatively light colored meat, 3 months old or younger. Suckling kids weighing less than 20 lbs are generally disappointing to buyers due to low meat to bone ratios and high carcass drying losses now that they must be marketed with the hide off. Kids gaining less than 10 lbs per month or 1/3rd pound per day after accounting for birth weight are generally not fleshy enough to be considered prime. Prime Easter kids are generally gaining at least 1/2 lb daily. There generally is a slight price (per lb of live weight) penalty for kids weighing over 40 lbs. Acceptable weights generally range from 20 to 50 lbs with 30 lbs considered optimum by most buyers. Cull adult animals are also popular for stews and curries at this time.

Eastern Orthodox Easter: 2014 April 20th
Type of lamb wanted - 40-55 lbs live weight, milk fed and fat.
Type of goat wanted - Similar to Western Easter kids. A slightly larger milk fed kid (i.e. averaging 35 lbs) is considered optimum.

Mother's Day: 2014 May 11th
Type of lamb or kid wanted - Suckling lambs and kids are in demand as well as 45 to 60 lb weaned market lambs and kids. Because of the shortage of market lambs and kids weighing 60 lbs or more in mid- May, prices are sometimes high for these larger young animals as well.

Start of Ramadan: 2014 June 29th
Id al Fitr (The Festival of the Breaking of the Ramadan Fast): 2014 July 29th &
Muharramn (Islamic New Year): 2014 October 25th
Type of lamb wanted – Weaned market lamb 60-80 lbs.
Type of goat wanted - male and female kids with all their milk teeth (i.e. not older than @ 12 months). Males can be whole or castrated. Overly fat kids are discriminated against. Optimum live weight is about 60 lbs but weaned kids from 45 - 120 lbs. are accepted by different buyers.

Rosh Hashanah, starts at sundown: 2014 Sept 24th – 26th
Type of lamb wanted - Forequarters from weaned lambs 60-110 lbs.

Navadurgara, Navratra Dashara, Dassai or Dashain: 2014 Sept 25th-October 8th
Hindu holiday honoring the goddess Durga. In Nepal the holiday runs for 15 days while in India it runs for 10 days. Goats are generally slaughtered during the latter part of the holiday after which families meet together and celebrate with curried goat while receiving family blessings. Female goats are not acceptable for this holiday. Relatively tender male goats are generally used. Size of carcass depends on number of people expected to be fed. Weaned, market kids or yearling wethers are most in demand.

Id al Adha (Islamic Festival of Sacrifice, Eid): 2014 October 5th
Type of lamb wanted – 60-80 lbs. However, heavier old crop lambs are also in demand and may command the same price as new crop lambs.
Type of goat wanted - Prefer yearlings (i.e. animals with one set of adult teeth) that are blemish free. Large kids 60 - 100 lbs also in demand.
Animals with broken horns, open wounds, torn ears or physical injuries generally do not meet the criteria. In some cases, castrated animals or lambs with docked tails are frowned upon.

Other holidays when goat meat is commonly consumed include Christmas (December 25th), New Year's (Jan 1st), Cinco De Mayo (May 5th), the July 4th weekend, and the numerous Caribbean holidays in August - Carnival, Carifest, Jamaican Independence Day, etc. The Hispanic market for goat is for 15 to 30 lb live wt suckling kids for cabrito, and large weaned market kids for seco de chivo and barbecues. It is especially strong in some regions during Cinco de Mayo (May 5th), a popular Mexican holiday celebrating the victory of Mexican Forces over the French at the Battle of Puebla in 1862. Goats and sheep for July 4th weekend are animals suitable for barbecue, generally suckling lambs and kids for small parties and weaned market lambs and kids 55 to 120 lbs. for large celebrations. Optimal goats for the Caribbean holidays are young, smelly 60-80 lb bucks. However, older animals of all sexes are often in demand and customers may prefer to buy them rather than pay the extra price for prime young bucks. The Christmas and New Year's market is for milk fed kids and lambs. These young animals are rare, because they must be produced by out-of-season breeding in April/May for Sept/October births. Kids and lambs as light as 18 lbs may be readily accepted. Cull adult animals are also popular for stews and curries.

Raising Deer (and other Cervids) for Venison

Cervid farming (generally deer and elk) for venison in the United States lags Europe and Asia. The New Zealand venison industry is currently the largest, most organized in the world. Venison from New Zealand makes up nearly 85 percent of the market. US producers, are estimated to be supplying only 15% of venison consumed domestically. This low market share is a result of there being a relatively few producers and even fewer processors in the US. The market for venison is predicted to grow 25 to 30 percent annually so there may be opportunities for growers with access to markets and processing facilites. The top venison producing states in the US are Texas, Pennsylvania, Michigan, Wisconsin and Ohio.

Since deer naturally consume less fodder than cattle and feed in a manner that is less damaging to pastures, where there are strong markets and where processing is available, deer farming can be up to three times as profitable as traditional livestock production. Good pasture and quality hay or other supplemental feeds are important for successful deer farming. Corn and commercial deer pellets are often added to hay to provide energy in winter and to add weight to pre-butcher stags. Deer pellets can be used to ensure the animals are getting the proper nutritional elements required for good health and fitness. Deer have rapid maturation rates and can reproduce for up to 20 years. Feeding pellets or corn on a regular basis establishes a routine where the owner interacts with the animals.

Chronic Wasting Disease

CWD is a fatal, neurologic disease of deer caused by a disease agent called a prion, which eventually destroys the brain tissue of infected animals. Prions are shed by infected animals in their saliva, feces and urine. The time from infection to the first outward signs of illness (animals appear weak and unsteady) may be two years or longer. Soil contaminated with CWD prions cannot be decontaminated and can remain as a source of CWD exposure to wild deer for years. At the present time, the only accepted means of diagnosis must be performed after an animal suspected of being infected with CWD is dead.

Several sources also demonstrate that deer farming/ranching can produce a quality herd on very little acreage, usually 20 to 60 acres of land. The acreage should be capable of producing good pasture that incorporates a handling area and an animal control area known as a "squeeze" chute or pen. In most states, the enclosure must be constructed with at a fence that meets all regulatory criteria. This usually constitutes a costly "up-front" investment in the business.

Three-quarters of the highest-priced venison cuts in the commercial trade come from the hind legs. The advantage of deer meat over other livestock meats is its low carcass fat. The highest-quality carcasses having the least fat content are produced from young red deer stags by slaughtering them at 15 to 16 months of age and from hinds at 18 months of age. Yearling red stag carcasses in New Zealand weigh about 60 kg and have a 5 percent to 8 percent fat content (compared to sheep 25 percent and cattle 40 percent). Stag usually are taken off grass and out of the feedlots at 12, 18 and 27 months, and fully dress-out at 58 percent to 60 percent by carcass weight. The best cuts obtained from a lean, young red deer carcass are about 33 percent of its empty body weight; these are predominantly hind-quarter cuts.

Farm-raised deer are a livestock operation, and this means that most, if not all, of the rules and regulations pertaining to livestock apply to deer or elk, including rules pertaining to handling, slaughter, product labeling and transportation. For example, in culinary terms, "venison" can be meat from deer, elk, moose, caribou, antelope, and pronghorn. However, when this meat is offered for sale, the name of the specific animal must be specified on the package label. Also, because of the concern about Chronic Wasting Disease (CWD) escaping to the wild deer population in New York, emergency regulations banning imports of several cervid species between November 16, 2013 and August 1, 2018 have been implemented. These species include Rocky Mountain elk, red deer, mule deer, black-tailed deer, white-tailed deer, sika deer, and moose. New York will still permit the importation of deer semen for artificial insemination. New York has additional regulations for importing cervids in from other states that are intended for slaughter. See http://www.agriculture.ny.gov/AI/import_export.html for more information.

continued on back page

Date(s)	Program Information		Time	Location (s)	To Register
April					
Apr 11	Hay, Balage, and Forage Quality Workshop	Learn to better manage your hay crop for quality and value with Cornell Cooperative Extension. Whether you are a seasoned veteran or a new farmer, this class is for you! An in-depth school on producing and marketing hay and balage; and feeding forage to beef, sheep, goats, horses, and alpaca to maximize livestock performance.	11am-2pm	2 sites: CCE Ulster County, Kingston, NY; & CCE Orange County, Middletown, NY	For more information: Contact the livestock educators in Ulster, Sullivan or Orange County. Registration form available at http://www.cceulster.org/2014%20Hay%20Baleage%20Reg%20Form2.pdf
Apr 16	Agriculture Manager's Breakfast at SUNY Ulster to Focus on Workplace Safety	The discussion will provide an overview of livestock handling, farm vehicle safety, use of protective equiptment with chainsaws, monitoring and mitigating the impacts of dangerous employee working conditions such as heat and cold stress, and allocating age-appropriate tasks for youth workers on farms.	7am-9am	Howard C St. John Business Seminar Room on the UCCC Campus, Stone Ridge, NY	Call (845) 687-5030 for pre-registration information.
Apr 16-17	Hazard Analysis Critical Control Point for Meat and Poultry Processors (HACCP)	Sponsored by Cornell Cooperative Extension of Tompkins County. This course covers the fundamentals of HACCP (Hazard Analysis Critical Control Point) and the application in meat and poultry processing operations. It provides the participant with hands-on experience in developing a HACCP plan. This course is certified by the International HACCP Alliance and meets USDA requirements for HACCP training.		Ramada Ithaca Hotel and Conference Center 2310 North Triphammer Road, Hwy 13 and Triphammer Road Ithaca, NY	Matt LeRoux, 607-272-2292 To register: http://www.cvent.com/events/hazard-analysis-critical-control-point-programs-for-meat-and-poultry-processors-haccp-/event-summary-ff60db0e0736431099ef-37f32a3f8835.aspx
Apr 17-18	Mortality/Manure Composting Workshop	Presented by Cornell Waste Management Institute, Jean Bonhotal and Mary Schwartz. Attendees will have the opportunity to visit and learn about on-site composting systems at local farms and agribusinesses in Orange, Sullivan and Ulster counties. During and following the tours we will discuss composting systems and methods, successes and challenges associated with different technologies, and how to improve management of organic materials.	9am-4pm both days	CCE Ulster County Office, and sites in Orange and Sullivan Counties.	For more information: Contact the livestock educators in Ulster, Sullivan or Orange County. Registration form available at http://www.cceulster.org/2014%20Compost%20Workshop%20and%20Facility%20Tour%20Reg%20Form.pdf
Apr 19	Milking (Youth Program)	There is a lot to think about when milking a cow if you are not familiar with the process. We will go over the parts to a milking machine, milking procedures, and mastitis	10am-12pm	Orange County, location to be determined	Jennifer Simpson at 845-344-1234 or jks236@cornell.edu
Apr 26	Intro to Vet Science (Youth Program)	Ulster County 4-H Program, in partnership with SUNY Ulster, will be hosting an Introduction to Veterinary Science Program for youth ages 9-12. For this program, veterinarians, SUNY Ulster professors, and animal science professionals will be presenting information and hands-on activities focused on veterinary science.	9:30am-2pm	119 Algonquin Hall, SUNY Ulster (491 Cottekill Rd, Stone Ridge, NY 12484)	http://www.cceulster.org/4-H/2014%20Intro%20Veterinary%20Science%20Registration%20Form.pdf
Apr 27	Feeding and Housing Your Backyard Chickens	Learn everything you need to know about housing, feeding and care for a backyard chicken. Class will include a take-home list of supplies needed to get off to a good start!	1pm-2:30pm	Ulster County Fairgrounds, 249 Libertyville Road, New Paltz, NY	For more information: call Erin Campbell-Craven at 845-340-3990 x327 or email eac266@cornell.edu. To register http://www.cceulster.org/2014%20Backyard%20Chickens,%20Brochure%20for%20Series%20of%20Workshops%20April-June%202014.pdf
Apr 27	Learn to Build a Backyard Chicken Coop	Hands-on class to learn how to build a portable A-frame 8' by 5' chicken coop. Take home an easy to assemble (pre-cut) kit and the plans to build the house!	3pm-5pm	Ulster County Fairgrounds, 249 Libertyville Road, New Paltz, NY	Same as above
May					
May 3	Hay and Forage Education Field Day	Building on the information presented during the first two classes, we will go out in the field with Dave Roberts, NRCS State Grazing Lands Specialist, who will discuss pasture management, plant ID, and hay production.	10am-2pm	TBD (Pine Bush, NY)	For more information: Contact the livestock educators in Ulster, Sullivan or Orange County.
May 7, 9 and 10	Finger Lakes Sheep Producers Cooperative wool pool	Please go to the PDF under registration for more information.		Empire Farm Days site on Rt 414 one mile south of Seneca Falls, NY	http://www.sheep.cornell.edu/calendar/2014FingerLakesWoolPool.pdf
June					
Jun 18	Rotational Grazing, Pasture Management and Forage Plant Identification	Join Karen Hoffman of the USDA - Natural Resources Conservation Service for a pasture walk, discussion of the principles of rotational grazing, lessons in identifying forage plants and basics of livestock nutrition on pasture.	2:30pm-4:30pm	Glynwood's Office 362 Glynnwood Rd Cold Spring, NY 10516	https://www.eventbrite.com/e/farm-skills-workshop-rotational-grazing-pasture-management-and-forage-plant-identification-tickets-10997950165
	Backyard Chicken Health and Care	Dr. Jarra Jagne, a veterinarian with 20 years of experience in poultry disease management and Senior Extension Associate with Cornell University's Animal Health Diagnostic Lab will teach you how to keep your chickens healthy, and will answer questions on common poultry diseases and health problems, and how to prevent and treat them.	6pm-8pm	CCE Ulster County Education Center, 232 Plaza Road Kingston, NY	Same as April 27th info (chicken housing)
Jun 26	FAMACHA: Internal Parasites in Sheep & Goats	This workshop is designed to help sheep and goat farmers develop integrated parasite management (IPM) programs. Dr. tatiana stanton of Cornell University will cover the basics of internal parasite control (parasite life cycles, effects of nutritional and evasive pasture management) and then move on to serious discussions of dewormer resistance and judicial use of dewormers on the animals needing deworming rather than on the entire herd or flock.	11am-5:30pm	Glynwood's Office 362 Glynnwood Rd Cold Spring, NY 10516	https://www.eventbrite.com/e/farm-skills-workshop-famacha-internal-parasites-in-sheep-goats-tickets-10998064507

Pastured Hog Production continued

producers can make use of pasture forages, self-harvested grain and small grains in order to keep costs low.

Stocking Levels for Pasture, Recommendations:

SOWS with LITTERS	6 to 8 per acre
PIGS, weaning to 100 pounds	15 to 30 per acre
PIGS, 100 pounds to market	10 to 20 per acre
SOWS, gestating	8 to 12 per acre.

Grazing hogs on pasture not only benefits the animals but also can improve the overall farm, as hogs will clean up weather-damaged crops and weed species, fertilize pastures/fields with manure and can even be used to "till up" underproductive areas. Pastured hogs also harvest much of their own food, which reduces feed costs. For further information on raising hogs on pasture the following resources are recommended:

- Lance Gegner. 2004. Hog production alternatives. ATTRA November. http://smallfarms.wsu.edu/education/pierce/ssfr2010/Lesson%209_Sustainable%20Livestock%20&%20Poultry/hog.pdf
- Profitable Pork Alternative strategies for Hog Producers. SARE 2003, http://www.sare.org/Learning-Center/Bulletins/Profitable-Pork
- "Small Scale Pastured Hog Production" by Bridget O'Meara, GrassWorks www.grassworks.org

Deer Farming - continued from page 11

In New York all venison must still come from an "approved" processing source in order to be sold to retail stores, restaurants or wholesalers. In New York State exotic animals, like cervids, are covered by New York State Agriculture and Markets Law Article 5-A.(This is why a NYS licensed 5-A plant is an approved slaughtering and processing facility in New York for these exotic animals.) New York does not allow the sale of hunter harvested deer.

Most industry insiders suggest that anyone interested in raising cervids attend state industry group meetings on a regular basis and visit several different farms to determine what type of operation is best suited to their particular interest. Our state association is the New York Deer and Elk Farming Association (http://www.nydefa.org/index.php). The Northeast Deer and Elk Farming Association (www.ndef.org) is an organization that also provides trainings to deer and elk farmers in the region.

Contact Information

Cornell Cooperative Extension of Sullivan County
Jerry Skoda Education Center
64 Ferndale-Loomis Rd
Liberty, NY 12754
(845) 292-6180
Michelle Lipari, Livestock Educator - mml249@cornell.edu
Melinda Meddaugh, Agriculture Program Leader - mm2592@cornell.edu

Cornell Cooperative Extension of Orange County
18 Seward Ave, Ste. 300
Middletown, NY 10940
(845) 344-1234
Jennifer Simpson, Dairy and Field Crop Educator - jks236@cornell.edu
Maire Ullrich, Agriculture Program Leader - mru2@cornell.edu

Cornell Cooperative Extension of Ulster County
232 Plaza Rd.
Kingston, NY 12401
(845) 340-3990
Erin Campbell Craven, Livestock Educator - eac266@cornell.edu
Justin O'Dea, Field Crops Educator - jko32@cornell.edu
Elizabeth Higgins, Agriculture Program Leader - emh56@cornell.edu

Blast from the Past
Cornell Recommendations from 1951

More LIME on your land

Have you suddenly realized that your alfalfa meadows run out quicker than they used to, that the good red-clover seedlings aren't quite so certain? Disease, or a lack of potash or of some minor element, may be the cause, but probably it is a lack of lime. A realization of a lack of lime sneaks up on you.

Few farmers in New York try to farm acid soils without lime, but many use 1 ton where 2 are needed.