With spring finally here and summer just around the corner, it will be critical to recognize heat stress and provide measures for heat abatement or cow cooling. Heat stress is estimated to cost the dairy industry over $900 million annually due to decreased milk production, reproductive losses, rumen acidosis, mastitis, and transition cow disease. Interestingly, a lactating dairy cow can produce up to 6,000 BTU per hour, and as a result her thermo-neutral zone or “comfort zone” is between 40°F and 60°F. In high humidity a temperature of just 72°F can initiate heat stress in dairy cows; therefore it is important to recognize and monitor heat stress. In group housing a good indicator of heat stress is cow respiration rates. Respiration rates can be easily monitored by observing movement of the nostrils and rib area during inhalation and exhalation. If the average respiration rate is greater than 70 breaths per minute, it is likely that these animals are experiencing heat stress and may require additional measures for cow cooling.

Currently, there are three basic ways to cool cows which include providing adequate shade, airflow, and water. It is generally recommended to use a combination of all three measures to effectively cool cows during hot weather.

**SHADE**

When providing shade, it is best to use solid shade. If using shade cloth make sure to provide more than 90 percent protection from the sun. In open lots it is recommended to provide 40 to 45 square feet of shade per cow.

**AIR**

Maintaining adequate air quality requires a combination ventilation and airflow. Open sidewalls, ridge openings, and eaves maximize air exchange while fans facilitate airflow and evaporative cooling. Airflow is usually measured as cubic foot per minute or (cfm), and fans located in feed lanes and freestalls should maintain airflow at 800-900 cfm per feed space/stall. This usually requires 36” fans to be placed every 20’-24’. When mounting fans in feed lanes and in freestalls each fan should be pointed at the ground below where the next fan is mounted.
Mission Statement

The NWNY Dairy, Livestock & Field Crops team will provide lifelong education to the people of the agricultural community to assist them in achieving their goals. Through education programs & opportunities, the NWNY Team seeks to build producers’ capacities to:

- Enhance the profitability of their business
- Practice environmental stewardship
- Enhance employee & family well-being in a safe work environment
- Provide safe, healthful agricultural products
- Provide leadership for enhancing relationships between agricultural sector, neighbors & the general public.
In holding areas airflow should be maintained at 1,000 cfm per cow, and generally requires one 36” fan every 150 square feet. Fans should be mounted at a minimum height of 8’, but low enough to provide sufficient airflow while still clearing cows and machinery. Once installed fans should be properly maintained and free of dust and debris. It is also recommended to regularly check fan alignment and orientation, ensure all belts are tight, and moving parts lubricated (if necessary) as poor fan maintenance can reduce fan efficiency by greater than 40%.

**WATER**

In group housing, water troughs should be located in at least 2 places and provide a minimum of 3” linear water space per cow. If unable to provide 3” linear water space per cow, consider installing a water trough along the exit lane from the parlor as cows consume approximately 30% of their daily intake following milking. Ensure water troughs are clean, and water quality as well as flow rates are adequate during times of high water use.

In addition, sprinklers are highly effective at cooling cows because they increase evaporative cooling, which dissipates a large amount of heat as water changes state from liquid to gas. Evaporative cooling is maximized when sprinklers are run intermittently. This wets the backs of the animals, while allowing evaporation prior to the next cycle. Sprinklers should begin running at 70°F, and run intermittently every 15 minutes for 1 to 2 minutes. As temperature rises decrease the interval between cycles.

In group housing, feed line sprinklers should be mounted just above the neckrail, and deliver 0.5 – 1.0 gallons per minute. In holding areas, sprinklers should deliver 1.0 – 8.0 gallons per minute. It is also noteworthy that when using sprinklers in areas of high cow density, such as holding areas, it is critical to provide adequate airflow is to avoid a sauna-like effect.

When considering heat abatement strategies, it is important to consider the location with the most immediate need. In general heat abatement measures are often required in holding areas, due to crowding. When cows are in close proximity, their ability to dissipate heat is limited causing body temperatures to rise rapidly. Other areas of high priority are areas of where animals are under high levels of stress and include pre-fresh cow pens, maternity pens, fresh cow pens, and hospital pens.

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**Beef Pasture Walk**

**Tuesday, June 14, 2011**

6:30 p.m. - 9:00 p.m.

Terry & Mary Lou Rothfuss, Floy Mar Farm
1865 Salt Road, Fairport

Terry & Mary Lou are opening up their farm to the community to see recent improvements to fencing, pastures, and lanes. Agency staff will be present to highlight the work designed and implemented.

**Questions???**
Call Nancy Glazier: 585.315.7746

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**Core Competencies**

- Identifying Lameness
- Hoof Anatomy
- HoofTrimming
- Hoof Disorders
- Infectious Foot Diseases
- Foot Bath Management

**Lameness as a Herd Health Issue & Hoof Trimming Techniques**

**Wednesday, May 18th**

CCE-Ontario County
480 N. Main Street
Canandaigua

**Thursday, May 19th**

CCE-Wyoming County
401 North Main Street, Warsaw

9:30 AM - 3:00 PM, in class and on farm demonstrations
Cost: $50.00 per person

Please register by:
Monday, May 16th
To register call:
Cathy Wallace: 585.343.3040 x138
Email: cfw6@cornell.edu

**Questions???** Call:
Jackson Wright: 585.746.3016
Jerry Bertoldo: 585.281.6816

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When is the right time for 1st cutting?
By: James Kingston

Within a few weeks 1st cutting chopping will be in full swing. Last year we witnessed how an early, warm spring can set the hay crop ahead of schedule with some farmers chopping as early as May 12th. April’s cold temperatures could mean the complete opposite for this year 1st cutting. Chopping hay at the proper stage, depending on the mix, will ensure high quality feed and hopefully can reduce the amount of high priced grain needed in the feed ration. The guide and chart below provide the needed information to determine proper timing to obtain the highest quality forage.

When predicting the percentage of the mix, 95% of people tend to overestimate the amount of alfalfa in the stand. It is suggested to gather representative samples of the field. Even grabbing three 1’X1’ samples and separating the grasses and the alfalfa from each other can provide a representative sample. Weighing the grass and alfalfa samples and determine the mix percentage. By going through this procedure you can train your eye to estimate hay mix percentage with more accuracy for future fields.

**Goal % NDF**
NDF (Neutral Detergent Fiber) is by far the best predictor available to determine forage quality for lactating dairy cows. NDF content in the field is best predicted by using alfalfa height for both alfalfa and grasses. (See Chart)

**Grasses** the goal is an NDF level (on a dry matter basis) is 50% (target range 48-55). Tallest alfalfa height will be 16-17 inches.

**Alfalfa** the goal is an NDF level of 40% (target range 39-43). Tallest alfalfa height will be 28-30 inches.

**Mixed stand** of 50% grass and 50% alfalfa the goal is an NDF level of 43%. Tallest alfalfa height will be 22-23 inches.

Begin harvest early enough so that most of your crop is harvested by the “ideal” range.

Typically NDF increases about 0.5 to 0.7/day for alfalfa was and about 0.8 to 1.2/day for grass. Expect the lower end of that range in cooler weather and the higher end in warm.
May’s “Most Wanted” Pest List

By: Mike Stanyard

As crops are going into the ground, emerging and growing in May, many insect pests could be dining on your profits. Below is a list of the culprits you should be wary of and what their feeding damage looks like. May is a very important month to get out in your fields, scout, identify, and manage insect pest before they become a serious problem!

**Alfalfa: Alfalfa Weevil**
- Larvae emerge in April
- Look for shot-hole feeding in upper leaves
- Threshold: 40% of plants have feeding injury

**Oats and Wheat: Cereal Leaf Beetle**
- Black slimy slug-like larvae
- Strip green tissue off leaves
- Threshold: 3 or more eggs + larvae per stem

**Corn: Black Cutworm**
- Eggs laid in April on grasses and weeds
- Larvae cut corn plants up to V6
- Threshold: 5% of plants cut

**Corn & Soybeans: Seedcorn Maggot**
- Look for uneven emergence, stunting
- Small maggots feed on large seeds
- Controlled with seed treatments

**Soybeans: Slugs**
- Look for holes in leaves, slime trail
- More prominent in no-till
- Can be controlled with baits

**Soybeans: Soybean Aphid**
- First found around mid-May
- Look on newest trifoliate
- Threshold: 250 per plant
Ready for 1st Cutting?

By: Jerry Bertoldo

It won’t be long until the first hay crop will be ideal for chopping. Purchased feed cost pressures will continue to drive the percentage of forage in dairy diets. It is now common to see 80 plus pounds being shipped with forages representing well over 60% of the diet. This is not possible if attention is not paid to early maturity at harvest, particle length, packing density, covering, inoculants or preservatives, face management and consistency of what the cow eats bite after bite. The process of forage management involves the crop, equipment, advisors, machinery operators, monitoring and an executive to decide when and how. Whether you maintain bunks, drive over piles, AgBags or uprights you need to pay attention to the same principles governing silage preservation and stabilization.

Think about the following points before you knock down that crop. Once things get rolling it is hard to stop and rethink things.

* Make sure the chopper is set up for haylage. Out of specs settings and worn parts cost time and fuel.
* Sharpened knives and adjust the shear bar. Is the shear bar worn or pitted? Can it be flipped or changed end for end?
* Sharpen knives daily or more frequently if necessary.
* Adjust the feed rollers for the desired length of cut.
* Check for wear or damage on the blower paddles to endure efficient delivery through the pipe.
* Check the blower band or wear plate for wear and damage.
* Wide swathing takes advantage of natural water loss from the plant and adds to the sugar content of the feed.
* Use a shaker box during harvest to monitor chopper performance and ensure target chop length.
* Check dry matters of forage coming off the trucks/wagons during the day to avoid silage that will be too wet or dry. These can vary widely.
* Sidewall plastics help keep out oxygen, but make packers worried about getting too close and shredding the plastic. Densities by sidewalls are often low resulting in poor silage quality defeating the purpose of the plastic.
* Silage inoculants and acid preservatives pay you back 90% of the time if dry matters are reasonable.
* Pack bunks and piles continuously while filling with as many tractors as can fit the space!
* Keep layers as thin as possible. 6” makes a huge difference over 12” in final density and quality.
* Do not continue packing hours after the last truck was dumped. The depth of impact is less than two feet. Excessive tractor passes just cost you labor and fuel.
* Cover silage in between long periods of filling (over 1 day) to avoid those “dark layers” of poor quality in the face later.
* Cover bunks/piles right after filling. Consider newer technology products such as SiloStop® which are much more effective in allowing oxygen penetrate than any heavy mil plastics.
* Sand or gravel bags are more effective than tires for holding plastic in place.

Like the old adage says “an ounce of prevention is worth a pound of cure.”

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AG FOCUS MAY 2011 WWW.NWNYTEAM.ORG
**Farm Business Chart**
and the *Dairy Farm Business Summary Program*

*By: John Hanchar*

The Farm Business Chart is a tool which can be used in analyzing your business. Compare your business by drawing a line through or near the figure in each column, which represents your current level of performance. The five figures in each column represent the average of each 20 percent or quintile of farms included in the summary. Use this information to identify business areas where more challenging goals are needed.

More detailed and extensive information is available on the NWNY Team website, where you’ll find the *Dairy Farm Business Summary Program* Progress Report.

**FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS**

**52 Western New York Region Dairy Farms, Preliminary 2010**

<table>
<thead>
<tr>
<th>Size of Business</th>
<th>Rate of Production</th>
<th>Labor Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker Equivalent</td>
<td>No. of Cows</td>
<td>Lbs. of Milk Sold</td>
</tr>
<tr>
<td>(14)*</td>
<td>(12)</td>
<td>(12)</td>
</tr>
<tr>
<td>35.28</td>
<td>1,693</td>
<td>44,019,394</td>
</tr>
<tr>
<td>19.22</td>
<td>-903</td>
<td>23,500,718</td>
</tr>
<tr>
<td>12.45</td>
<td>623</td>
<td>14,595,052</td>
</tr>
<tr>
<td>7.13</td>
<td>353</td>
<td>7,776,505</td>
</tr>
<tr>
<td>3.53</td>
<td>122</td>
<td>2,716,319</td>
</tr>
</tbody>
</table>

| Cost Control | | | |
|---|---|---|---|---|---|---|
| Grain Bought/Cow | % Grain is of Milk Receipts | Machinery Costs/Cow | Labor & Machinery Costs/Cow | Feed & Crop Expenses/Cow | Feed & Crop Expenses/Cwt. |
| (12) | (12) | (14) | (14) | (12) | (12) |
| $770 | 20% | $463 | $1,081 | $1,175 | $5.31 |
| 1,134 | 26 | 614 | 1,419 | 1,462 | 6.02 |
| 1,262 | 29 | 703 | 1,523 | 1,585 | 6.48 |
| 1,353 | 31 | 828 | 1,618 | 1,696 | 6.96 |
| 1,509 | 34 | 1,053 | 1,966 | 1,935 | 8.27 |

| Value and Cost of Production | Profitability |
|---|---|---|---|---|---|
| (12) | (12) | (12) | (4) | (4) | (4) | (8) |
| $5,008 | $10.66 | $14.82 | $2,002,349 | $1,762,594 | $640,837 | $1,748,569 |
| 4,673 | $12.57 | 15.84 | $1,655,56 | $478,842 | 279,578 | $45,625 |
| 4,397 | 13.62 | 16.89 | 547,834 | 396,339 | 130,295 | 347,104 |
| 4,162 | 14.48 | 18.32 | 295,231 | 226,663 | 63,722 | 155,082 |

*Page number of the participant’s DFBS where the factor is located.

“———” Approximate performance levels for the top 25% of WNY DFBS farms based upon the rate of return on all capital without appreciation – 13 farms averaging 14.90% RROA w/o appreciation, Preliminary 2010.
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HLW Acres, Attica
By: Nancy Glazier

Hermann and Laura Weber and family have a unique operation. They run a small, seasonal, poultry processing facility at their farm in Attica. The facility was not designed for freezing temperatures, so the slaughtering is done May through November. The operation is licensed under the NYS 5A permit, USDA exempt; they can process up to 20,000 of birds a year.

Livestock arrived in June 1990 after purchasing the farm in November 1989. They started with a handful of beef, 25 chickens and 3 turkeys. Bird numbers grew; the following year they raised 50 birds, the next year 100. They were dissatisfied with their processor, so in 1991 they began processing their own birds with purchased equipment. After another equipment upgrade in 2001-02, they started advertising for business.

It takes roughly 8 weeks to finish a bird. The calendar is full and as of April 14 the first available slaughter date was August 1, 16 weeks out. To help space out slaughter dates, they order meat bird chicks for producers in 7 orders through the season. As a courtesy, they order one batch of egg layers, 6-10 different breeds. This year, due to a miscalculation at the hatchery, deliveries of layers and meat birds have overlapped. This has made life a little hectic for Hermann. Since he had to hold egg layers for some customers longer than usual, he was out of brooder space for meat birds. The day I visited the farm, 1,000 chicks were waiting in his kitchen for pickup! The peeping was deafening as Hermann and I talked about the business.

Besides his meat birds, Hermann raises 100-140 turkeys for Thanksgiving, has 25 head of beef and 70 meat goats. He has 35 does now with the goal to grow the herd to 100 does. All the livestock are pasture raised. His time on the farm will dramatically change when he retires from his fulltime job at Attica Correctional Facility. This will give him a better opportunity to manage his operation, and the help of his kids in the summer doesn’t hurt either.

The Weber family is also passionate about 4-H. With less than 2% of people in the country involved with farming and the average age is 58, more kids need to get involved with agriculture. He doesn’t want our food supply to end up being imported. He has been asked to advise other counties on starting poultry clubs.

Another courtesy Hermann and Laura do provide is holding a pasture poultry seminar. The date this year – their 9th seminar – is May 21. It is held on the farm with outside speakers visiting every year; some are producers, others are feed or nutrition people. These speakers come from across the country and bring versatility and different perspectives. Usual turnout is 25 people from around the state. Lunch is barbecued chicken, so don’t miss it this year!
May 2011
18 Lameness as a Herd Health Issue & Hoof Trimming Techniques, 9:30 a.m. - 3:00 p.m., CCE-Ontario Co., $50.00 per person, RSVP by: Monday, May 16, Registration: Cathy Wallace: 585.343.3040 x138 or cfw6@cornell.edu
19 Lameness as a Herd Health Issue & Hoof Trimming Techniques, 9:30 a.m. - 3:00 p.m., CCE-Wyoming Co., $50.00 per person, RSVP by: Monday, May 16, Registration: Cathy Wallace: 585.343.3040 x138 or cfw6@cornell.edu

JUNE 2011
2 Small Grains Management Field Day, Musgrave Research Farm, Poplar Ridge Road, Aurora, 10:00 a.m. - Noon, Questions??? Contact Larrissa Smith, lls14@cornell.edu or Phone: 607-255-2177
14 Beef Pasture Walk, Terry & Mary Lou Rothfuss, Floy Mar Farm, 1865 Salt Road, Fairport, 6:30 p.m. - 9:00 p.m.