

# North Country Ag Advisor

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Cornell University Cooperative Extension North Country Regional Ag Team November 7, 2017 Feeder School 9-1pm Soil and Water, Canton

November 8, 2017 Feeder School 9-1pm Miner Institute, Chazy

November 30, 2017 Feed Dealer Luncheon 12-3pm Ramada Inn, Watertown

November 2017

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#### Contact us directly through our website: http://ncrat.cce.cornell.edu/

#### Our Mission

"The North Country Regional Ag Team aims to improve the productivity and viability of agricultural industries, people and communities in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex Counties by promoting productive, safe, economically and environmentally sustainable management practices, and by providing assistance to industry, government, and other agencies in evaluating the impact of public policies affecting the industry."

# Field Crops and Soils NNY Western Bean Cut Worm Trap Summary

By Mike Hunter

Western Bean Cutworm (WBC) is becoming a notable pest in field corn in New York State. Jefferson, Lewis, and Franklin counties continue to have the highest WBC moth trap catches in the state each year. Remember that WBC is a pest of field corn, sweet corn, and dry beans. Its presence in NYS was confirmed in 2009 and we have been monitoring its distribution throughout NNY since 2010. The Western Bean Cutworm has the potential to soon become the number one pest of field corn in New York State.

These traps are deployed to monitor moth presence and determine the peak flight. Traps help us identify fields at risk and when scouting should take place, but we cannot use trap counts to determine when a field should be sprayed with an insecticide. Management of the WBC is based on egg masses found on the leaves. It is also important to note that trap counts do not correlate to the amount of WBC damage to expect in the corn field. In fact, in 2016, we monitored a site that only caught 190 WBC moths for the entire season and that particular field had 18.75% of the ears with WBC feeding damage.

There were 52 WBC traps located in 27 NYS counties in 2017. Twenty seven WBC traps were monitored weekly in corn fields in NNY (Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex Counties). We caught a record number of WBC moths this season; the 27 WBC traps in NNY caught 23,658 total moths, averaging 876 moths per trap. To illustrate how much of a Western Bean Cutworm "hotspot" we are in NNY, the other 25 WBC traps located throughout NYS caught a total of 5,915 moths, averaging 236 moths per trap. The peak WBC moth flight in NNY occurred the first week in August (see graph on page 4).

Midwestern US entomologists suggest monitoring for the presence of WBC egg masses once trap counts reach 100 moths. We also focus our scouting efforts on fields that are in the pretassel or newly tasseling corn as the moths prefer these corn growth stages for egg laying. The action threshold used for WBC in field corn is using cumulative counts. Once we reach 5% of egg masses and/or small larva on the corn plants an insecticide application is warranted. This season, two corn fields in Jefferson County were found to be over the threshold and an insecticide application was made. These were the first known WBC treatments in field corn in the state.

Western Bean Cutworm populations continue to increase in NYS each year This is a corn pest that needs to be monitored closely to prevent corn yield and quality losses in the future. If you have any questions or would like more information about Western Bean Cutworm please contact North Country Regional Ag Team Regional Field Crop Specialists, Mike Hunter and Kitty O'Neil.

We would like to thank Joe Lawrence with PRO-DAIRY, Harry Fefee with CCE Franklin County, Mike Davis, Farm Manager, Willsboro Research Farm, and Mike Kiechle, a Jefferson County dairy farmer, for their assistance with weekly reporting of WBC trap catches.

Continue onto page 4 for graphs and charts.



## Farm Drainage Systems

-GPS- Tile Installation-



Ken Gerber 315-212-4658 Conrad Gerber 315-955-5639 Rock Haven Acres LLC. 24403 CR 47 Carthage, NY 13619

Western Bean Cutworm 2017-NNY												
Jefferson Co.	10-Jul	17-Jul	24-Jul	31-Jul	7-Aug	14-Aug	21-Aug	28-Aug	5-Sep	Season Total		Highest to lowest
Hounsfield	0	2	96	233	305	127	59	1	1	824	[ 1]	2464
Calcium	0	1	4	62	177	178	36	8	4	470	2	2364
Philadelphia	0	1	9	104	193	97	24	4	0	432	3	1914
Rutland	0	0	0	80	1449	742	179	14	0	2464	4	1864
Ellisburg	0	3	119	282	170	28	16	9	2	629	5	1825
Pamelia	0	1	23	173	711	556	73	4	0	1541	6	1541
Clayton	0	0	31	204	183	130	14	2	0	564	7	1160
Plessis	3	17	43	149	153	113	29	9	1	517	8	1135
Lewis Co.											9	926
Croghan	0	4	68	767	695	238	132	9	1	1914	10	926
Denmark	0	1	1	483	1188	572	92	26	1	2364	11	861
Turin	0	0	22	308	573	187	38	6	1	1135	12	824
New Bremen	0	1	47	192	284	32	13	6	0	575	13	819
Martinsburg	0	0	30	282	533	279	31	4	1	1160	14	629
Lowville	0	5	10	191	242	332	60	19	2	861	15	626
Harrisburg	6	10	39	319	528	464	394	63	2	1825	16	575
St. Lawrence Co.											17	564
Canton	0	0	0	79	316	159	257	8	0	819	18	517
Colton	0	0	1	45	40	12	26	0	0	124	19	470
Morristown	0	0	0	11	101	41	8	0	0	161	20	432
North Lawrence	2	0	35	113	352	342	77	5	0	926	21	356
Madrid	0	0	1	42	258	48	5	2	0	356	22	169
Huevelton	0	0	1	15	68	26	5	2	0	117	23	161
Waddington	0	0	0	3	29	95	11	6	0	144	24	151
Franklin Co.											25	144
Moira	2	1	4	53	245	252	65	4	0	626	26	124
Malone	0	0	6	19	255	921	659	4	0	1864	27	117
Dickinson Center	0	0	53	4	437	305	118	9	0	926		
Clinton Co.												
Chazy	0	1	7	24	66	32	33	5	1	169		
Essex Co.												
Willsboro	3	6	9	30	44	38	15	6	0	151		
	10-Jul	17-Jul	24-Jul	31-Jul	7-Aug	14-Aug	21-Aug	28-Aug	5-Sep	Final trap ave.		
Weekly Ave.	1	2	24	158	355	235	91	9	1	876		
										Total moth catch		
										23658		
											-	



## **2017 NNY Harvest Data will add to BMR vs NON-BMR Corn Research**

Press Release by Kara Dunn, NNYADP Publicist

**Chazy, NY.** The 2017 corn harvest in Northern New York is providing data to researchers with a grant from the farmer-driven Northern New York Agricultural Development Program to compare forage quality and yield between two distinct types of corn.

'We are interested to see if yields for the 2017 crop will continue to show no consistent difference between the BMR and non-BMR hybrids grown for silage,' said project leader Eric O. Young, research agronomist at the William H. Miner Agricultural Research Institute, Chazy, NY.

'In our regional trials to date the BMR hybrids have had a distinct advantage in fiber digestibility and therefore milk production potential,' Young added.

Brown MidRib, or BMR, corn has a naturally-occurring genetic variation that produces higher fiber digestibility that, in turn, increases the milk production potential of dairy cows. However, farmers are concerned that BMR corn may not yield as well as non-BMR corn hybrids.

'Until this project funded by the Northern New York Agricultural Development Program there has been relatively little research evaluating performance among Brown MidRib hybrids and non-BMR hybrids with respect to yield and forage quality,' Young noted.

The research in Northern NY includes commercially-available BMR hybrids currently on the market.

Data from the 2017 harvest will be compared with trial results with five corn hybrids grown at two farm sites in 2015 and 2016. Crop samples were evaluated for yield, digestibility, percent dry matter, acidity, starch and other components, silage fermentation, and quality after harvest.

Young notes, 'The differences in yield, starch, and fiber digestibility all have important implications for dairy ration formulation and farm economics. Our early results in the Northern New York trials have shown clear differences in fiber digestibility related to corn hybrid genetics.'

This research provides a data foundation for analyzing the potential milk production impact of using BMR and non-BMR hybrids in the dairy cow total mixed ration.

The 2015 and 2016 NNY BMR evaluation reports are posted on the Northern New York Agricultural Development Program website at <u>www.nnyagdev.org</u>.

The Northern New York Agricultural Development Program funds agricultural research and technical assistance in Clinton, Essex, Franklin, Jefferson, Lewis, and St. Lawrence counties. Funding for the Northern New York Agricultural Development Program is supported by the New York State Senate and administered by the New York State Department of Agriculture and Markets.

#### Media Contacts:

- . Project leader: Eric O. Young, Miner Institute, 518-846-7121, Young@whminer.com
- . NNYADP Co-Chairs: Jon Greenwood, 315-386-3231; Joe Giroux, 518-563-7523; Jon Rulfs, 518-572-1960
- . NNYADP Coordinator Michele Ledoux, 315-376-5270
- . NNYADP Publicist Kara Lynn Dunn, 315-465-7578, karalynn@gisco.net

## **2017 Feed Dealer Seminar**

The Feed Dealer Seminars are specifically targeted for nutritionists, veterinarians, crop and management consultants, extension educators, and dairy producers with specific interest in nutrition-oriented topics. They are designed to blend the latest concepts in feeding and other management aspects of dairies with field level application. They have been conducted annually as a road show with multiple sites in New York for many years.

#### Speakers:

Tom Overton, Ph.D., Professor of Dairy Management and Director, PRO-DAIRY Program, Cornell University Rob Lynch, DVM., Dairy Herd Health and Management Specialist, PRO-DAIRY Program, Cornell University Allison Kerwin, Ph.D. Candidate, Department of Animal Science, Cornell University

#### Topics:

- -- Dealing with forage quality challenges
- -- Research update -- strategies to manage hypocalcemia
- -- Antibiotics on the farm VFD update and results from selective dry cow therapy trial

#### North Country Locations:

Thursday, November 30, 2017 Ramada Inn, 21000 NYS Route 3, Watertown, NY Lunch at 12:00pm; Meeting at 1:00pm Cost for the meeting and lunch is \$30 To reserve your place please contact: Ron Kuck 315-704-8810 (cell) <u>rak76@cornell.edu</u> or Tatum Langworthy 315 788-8450 (office) <u>tlm92@cornell.edu</u> Wednesday November 29, 2017 Miner Institute, Chazy, NY Meeting 6:00pm-9:00pm To reserve your place please contact: Wanda Emerich , 518-846-7121 ext 117 or Sara Bull, 518-561-7450

Registration allows us to communicate any cancellations or changes in arrangements.

#### Other Locations: Held at 6 sites in New York and 1 in Vermont

Date	Time	Location	Contacts
Nov 28	8 AM to 11 AM	Holiday Inn, Oneonta, NY	Paul Cerosaletti or April Lucas –
			(607) 865-7090
Nov 28	6 PM to 9 PM	Cornell Cooperative Extension Office,	Dave Balbian –
		Ballston Spa, NY	(518) 312-3592
Nov 29	6 PM to 9 PM	Miner Institute, Chazy, NY	Wanda Emerich –
			(518) 846-7121 ext 117
			Sara Bull –
			(518) 561-7450
Nov 30	12 PM to 3 PM	Ramada Inn, Watertown, NY	Ron Kuck or Tatum Langworthy –
			(315) 788-8450
Nov 30	6 PM to 9 PM	Ramada Inn, Cortland, NY	Betsy Hicks or Jen Atkinson
			(607) 391-2660 ext 403
Dec 1	10 AM to 2 PM	Cornell Cooperative Extension, Batavia, NY	Cathy Wallace –
			(585) 343-3040 ext 138
Dec 19	10:30 AM to 2:30 PM	American Legion Post #27	Sue VanAmburgh –
		49 Wilson Road, Middlebury, VT	(518) 783-1322







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Preparing taxes may not be your idea of a good time, but with a Farm Credit East tax consultant in your corner, you can be sure that you've put in place the most beneficial tax arrangement for your business — because WE ARE YOU.



Our associates love what they do. How about you? Send us your selfie at FarmCreditEast.com/WeAreYou

# Dairy

# Key Messages from Training on Youngstock Housing and Ventilation

By Lindsay Ferlito

At the end of September, I had the opportunity to attend a training on youngstock housing and ventilation hosted by the University of Wisconsin Dairyland Initiative. It was a great opportunity to learn more on the latest recommendations as well as see how people are doing things in other areas across the country. Below are some key take home messages from the training.

#### Individual and group housing both work

Individual calf pens are better for biosecurity and identifying and handling sick calves, but there are some learning and social benefits of group housing. With individual housing, ensure pens are not too closed up and there is still fresh air reaching each animal. For group housing, have fewer than 12 calves/pen, and keep calves in individual pens for the first 3-14 days to get them off to a good start. A good compromise is pair or triplet housing, where calves are in individual pens and every other pen divider is removed once calves are 1-2 weeks old. An "all-in-all-out" system is recommended for groups.

The presenters showed examples of an ideal situation where farms built multiple small calf barns that could be filled within 2 weeks, and used these to do all-in-all-out to the fullest degree. Although most farms here in NNY can't do that, there are still benefits to all-in-all-out pens. For example, smaller, stable groups are associated with increased ADG and lower respiratory health issues.



Picture from Dr. Ken Nordlund, University of Wisconsin-Madison, showing multiple all-in-all-out calf barns.

Pens should be filled within 1-2 weeks, and the group kept stable. Wait at least one week after weaning before moving calves to give them time to adjust, and then keep the pen empty for a week to provide enough time to clean, sanitize, and dry out the pen before the next group comes in.

#### Provide calves with adequate space

Calves should be provided with at least 35 sq ft/calf of pen area, regardless of housing and pen type. Calves should also have adequate access to nipples or buckets for milk (more than 1 or 2 nipples in group pens) and about 12 inches of bunk space to consume starter. Additionally, calf barns should be designed to house 120-130% of the calves expected with the average calving rate. This ensures there is enough room for all calves even during peak calving months. These space recommendations come with valid reasons; studies have found that there are lower pen bedding bacteria counts in stalls where calves had more space, and anecdotal evidence suggests there may higher respiratory illness prevalence when calves have less than 35 sq ft/calf.

#### Provide lots of bedding and drainage

In the winter, providing calves with ample bedding and a nesting score of 3 (legs are not visible when they are lying down) is associated with a decreased prevalence of respiratory disease. Another way to achieve this is a nesting score of 2 (legs partially covered) and a clean, dry calf jacket. Proper pen drainage is key to keeping bedding dry and warm. Individual and group pens in the barn should have draining at the front of the pen to reduce moisture and liquids from dripping back into the bedded area. Hutches should be placed on a bed of small gravel/pea stone or sand to keep them up off the main ground and to provide drainage.

#### Provide adequate ventilation

When designing a ventilation system for a barn, 3 things should be considered: air exchanges per hour based on barn volume (ach), volume of air per animal (cfm/cow), and air speed (mph). The goal is to provide fresh, clean air to calves without creating a draft at calf level. The recommendations are to have 4 air changes per hour in cold weather, 15-20 in moderate weather, and 40-60 ach in the summer. Natural ventilation doesn't always provide adequate ventilation rates for many reasons, but positive pressure tubes are a great way to increase ventilation to each pen in the barn.

For questions on barn ventilation or designing a tube system for your calf barn, contact Lindsay Ferlito (<u>Lc636@cornell.edu</u>, 607-592-0290).



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DAIRY WELLNESS MAKES A DIFFERENCE



#### <u>Jefferson County Dairy Scene</u> Joining together for and about dairy farming in your county

Hosted by Cornell Cooperative Extension of Jefferson County

Tuesday, January 23, 2018 Watertown Ramada Inn 10:00am – 3:00pm \$30.00 includes lunch and handouts

Focusing on:

**Core acres:** Profit or loss on every acre. We know IOFC for our cows, why not our fields? Raising the "right" quality forage vs. the "highest" quality forage.

Effective use of water on dairies: Preserving ground water resources by fixing leaks and conserving water

**Technology** we should be using and is cheap to run. Give yourself the technology you want and need. Making farming an attractive career for the next generation of farmers.

**Keynote Address:** Generational and Consumer Product Trends or "Why don't people serve milk with dinner anymore?" Matt Draper, Executive Director of the Shipley Center for Innovations, Clarkson University.

For more info or to reserve your place please contact your local Extension educator at 315-788-8450 or email: Ron Kuck, <u>rak76@cornell.edu</u> Peggy Murray, <u>mlm40@cornell.edu</u> Alyssa Couse, <u>amc557@cornell.edu</u> Tatum Langworthy, <u>tlm92@cornell.edu</u>



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# **NEWS RELEASE**

NATIONAL AGRICULTURAL STATISTICS SERVICE United States Department of Agriculture • Washington, DC 20250 Ag Statistics Hotline: (800) 727-9540 • www.nass.usda.gov



FOR IMMEDIATE RELEASE

Contact: Sue King, (202) 690-8122 Teresa White, (202) 690-8123

#### Countdown to Census: What You Need To Know

#### Only eight weeks until producers start to receive the 2017 Census of Agriculture

WASHINGTON – Sept. 25, 2017 – In just a couple months, farmers and ranchers across the nation will start receiving the 2017 Census of Agriculture. Producers can mail in their completed census form, or respond online via the improved web questionnaire. The U.S. Department of Agriculture's National Agricultural Statistics Service has extensively revised the online questionnaire to make it more convenient for producers.

"The updated online questionnaire is very user-friendly – it can now be used on any electronic device, and can be saved and revisited as the producer's schedule allows," said NASS Census and Survey Division Director Barbara Rater. "Responding online saves time and protects data quality. That's our mission at NASS – to provide timely, accurate, and useful statistics in service to U.S. agriculture. Better data mean informed decisions, and that's why it is so important that every producer respond and be represented."

New time-saving features of the online questionnaire include automatically calculating totals, skipping sections that do not pertain to the operation, and providing drop-down menus of frequent responses. Producers still have one week to try the online questionnaire demo on the census of agriculture website (www.agcensus.usda.gov).

The census website will continue to be updated with new information through the census response deadline of February 5, 2018. One recently added feature is a new video from Secretary of Agriculture Sonny Perdue reminding all producers to respond when they receive their 2017 Census of Agriculture in the mail later this year.

Revisions and additions to the 2017 Census of Agriculture aim to capture a more detailed account of the industry. Producers will see a new question about military veteran status, expanded questions about food marketing practices, and questions about on-farm decision-making to better capture the roles and contributions of beginning farmers, women farmers, and others involved in running the business.

Response to the census of agriculture is required by law under Title 7 USC 2204(g) Public Law 105-113. The same law requires NASS to keep all information confidential, to use the data only for statistical purposes, and only in aggregate form to prevent disclosing the identity of any producer. The time required to complete the questionnaire is estimated at 50 minutes. In October, NASS will make a census preparation checklist available on the census website to help producers gather necessary information in advance.

Conducted once every five years, the census of agriculture is a complete count of all U.S. farms, ranches, and those who operate them; it is the only source of uniform, comprehensive, and impartial agriculture data for every state and county in the country. Farmers and ranchers, trade associations, government, extension educators, researchers, and many others rely on census of agriculture data when making decisions that shape American agriculture – from creating and funding farm programs to boosting services for communities and the industry. The census of agriculture is a producer's voice, future, and opportunity.

For more information about the 2017 Census of Agriculture, visit www.agcensus.usda.gov or call (800) 727-9540.

<sup>###</sup> 

## **Calves Still Need Water**

By Kimberley Morrill

As the weather cools down, many farmers are adjusting calf feeding and management protocols to match the colder weather.

**WATER** – Even when it's cold out, calves still need water. Livestock require water to maintain their immune system and stay healthy. Decreased water consumption leads to decreased feed intake and dehydration. While providing calves with water in the cold months can be a challenge, it's still important. If you are worried about frozen buckets, offer calves warm water,

Maintenance Requirements for Pre-weaned Calves									
Temp. °F	<b>60</b> <sup>a</sup>	50	32	15	5				
Body weight <i>,</i> lb		Μ	cal ME/d						
30	1.31	1.45	1.72	2.00	2.14				
40	1.62	1.80	2.14	2.48	2.65				
50	1.92	2.12	2.53	2.93	3.13				
60	2.20	2.43	2.90	3.36	3.59				
70	2.47	2.73	3.25	3.77	4.03				
<sup>a</sup> Lower critical temperature for calves less than 21 d age.									

shortly after feeding milk/milk replacer. Leave the water with the calf for 30 to 60 minutes and then collect the bucket.

**ENERGY** – When the temperature drops below  $60^{\circ}$ F calves need more energy. Calves have less than 5% body fat and do not have a functioning rumen to help keep them warm. If you do not increase the energy in their diet, they will prioritize energy intake to stay warm and limited energy will be available to maintain the immune system and for growth. To improve health, growth, and keep calves warm you need to feed them adequate amounts of milk or milk replacer (make sure the calves get enough MCals/day). As the temperature drops below  $60^{\circ}$ F, the energy needs increase. For a calf that weighs 70 pounds, when the temperature is 32<sup>0</sup>F her energy needs are 2.73 Mcal ME/day. This will continue to increase as she grows and/or the temperature decreases more.

You can calculate the energy content of milk or milk replacer with the following equation – just make sure you calculate on a 100% dry matter basis. EXAMPLE:

 $ME (Mcal/kg) = (0.057 \times \%CP) + (0.092 \times \%Fat) + (0.0395 \times \%lactose) * 0.93$ 

If you don't like math, use an online calculator:

#### http://www.calfnotes.com/pdffiles/CN122.pdf

In addition to providing adequate energy and protein, milk should be warm when fed, so the calf does not have to use energy to warm the milk while digesting it. During extreme cold, when temperatures drop below zero, a third feeding of milk or milk replacer may be needed to get enough energy into the calves.

Jackets and Bedding – As the temperatures drop, provide each calf with a clean and dry calf jacket. This helps the calf stay warm and allows more energy

from feed to go towards growth. Provide enough clean and dry bedding so the calves can nest; shavings and straw are a great option for winter time bedding. Try to avoid bedding calves with sand in the colder months as it draws away body heat and can lead to sick calves. In addition to jackets and bedding, make sure the calf is protected from the elements. This includes wind, snow, and rain.

#### **Calf Management Checklist**

- All calves receive colostrum or colostrum replacer ASAP after birth
- Navel is dipped
- Calves are permanently identified
- Clean, dry jacket is put on calf if it's cold out
- Calf is placed in a clean, dry, and well ventilated pen/hutch
- All calves receive a volume of milk/milk replacer to maintain health, growth, and vigor
- All calves have access to clean, fresh water to maintain proper hydration
- All caretakers are trained in calf care, nutritional requirements, and feeding techniques

Whole Milk (12.5% DM, 3.2% CP, 3.8% fat) Calculate all nutrients on 100% DM basis

CP = 3.2/0.125 = 25.6 Fat = 3.8/0.125 = 30.4 Ash = 6.4% on 100% DM basis = 6.4 Lactose = 100-25.6-30.4-6.4 = 37.6

Gross energy (Mcal/kg) = (0.057\*25.6) + (0.092\*30.4) + (0.0395\*37.6) \* 0.93 Gross energy = 5.34 Mcal/kg



# Farm Business

## Farm Finance 101—Income Over Feed Cost

#### By Kelsey O'Shea

Ever wish you paid more attention in that accounting class? Maybe you're a bit rusty on financial ratios, or looking to learn something new. Each month I will go over an accounting or finance topic as it relates to your farm business, so stay tuned. This month is focused on income over feed cost.

Income over feed cost has become one of the most monitored measures of profitability, with feed costs being the largest single expense on dairy farms today. Most farms evaluate this parameter on a monthly basis to help track and ensure profitability throughout the year.

Here is the information you will need to calculate income over feed costs (IFOC):

- Average milk price/month
- Total lbs produced per day over a month
- Number of cows milking per month
- Amount of feed used (tons)
- Cost per ton of feed
- 1. First calculate the total income: milk price \* (total lbs per day/100) \* 30 days
- 2. Then calculate total cost per ton of feed from your records and multiply by tons fed per day and 30 days for a month
- 3. Then, take total income and subtract total feed cost. This will give you a dollars per day IFOC. This is the amount of funds you have left over per month to pay all other expenses. There are two ways to maximize income over feed costs:
  - A. **Improve income** either by increasing lbs milk produced per month or improving components to improve milk price per cwt.
  - B. **Decrease feed cost** by adjusting rations or buying feed components in bulk. This is a balance though, decreasing quality or amount of feed may decrease milk production.

It is best to consult your nutritionist before making big feed changes.



# Livestock

# Have you Thought about how Trucking Affects the Value of your Animals?

By Ron Kuck

Every week, dairy farmers send cull cows or bulls calves to auction. For the beef farmer, fall is the time many of you get ready to move your feeder cattle to the sale barn or have a private buyer haul them away.

The proper handling and transport of your cattle can reduce sickness in your calves, prevent bruises, and improve the quality of the meat from these animals. As part of National Beef Quality Assurance a *Master Cattle Transporter* training program is one of the offerings. This training covers properly moving cattle up to and onto the trailer, distributing cattle correctly on the trailer, hauling techniques that reduce cattle stress, and handling emergency situations that can arise during transport. Here are some of the highlights:

• **Cattle handling guidelines and diagrams:** "Persuaders" such as flags, plastic paddles, and a stick with plastic ribbons are the best tools for moving cattle.



- **Checklists for loading/unloading** such as back the trailer up to chute squarely and evenly. Determine if chute is in good repair. Make sure the gates from and to the pen are open and the path is clear.
- Loading suggestions and worksheets. It is the driver's responsibility to know the dimensions of the trailer, to load only the size of cattle that will safely and humanely fit the trailer, and to adhere to the maximum legal load limit for the states in which they are operating.

Compartment		Average Weight of Cattle													
Weight	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500			
1,500	3	3	2	2	1	1	1	1	1	1	1	1			
4,000	10	8	6	5	5	4	4	3	3	3	2	2			
4,500	11	9	7	6	5	4	4	3	3	3	2	2			
6,000	15	12	10	8	7	6	6	5	5	4	4	4			
8,000	20	16	13	11	10	8	8	7	6	6	5	5			
9,000	22	18	15	12	11	10	9	8	7	6	6	6			
20,000	50	40	33	28	25	22	20	18	16	15	14	13			
21,000	52	42	35	30	26	23	21	19	17	16	15	14			

48 ft - 50,000 lb Gross - Feeder (	Cattle Lighter	Than 700 lb	)S
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4,000 lbs	9,000 lbs	9,000 lbs	1,400 lbs
4,000 lbs	9,000 lbs	9,000 lbs	4,600 lbs
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- Checklist for traveling. Determine the route and take into account weather and road construction. Assemble the paperwork needed for transit and unloading and provide it to the driver. Check the truck and trailer on all sides to make sure all cattle are standing and ready for travel.
- Checklists for hot/cold weather factors. Unprotected cattle hauled at highway speeds can be subject to dangerous wind chill. Wind chill below 0°F can have drastic adverse effects on the health of cattle. If cattle are wet, the danger is even greater.

Wind Chill Index (WCI)

Mind	LowTe	empera	ture °F				wind Chill Index (WCI)												
Speed	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14	16	18	20	22	24	26
25	-59	-56	-53	-50	-47	-44	-41	-38	-35	-32	-29	-26	-23	-20	-17	-14	-12	-9	-6
23	-57	-54	-51	-48	-45	-42	-39	-36	-33	-30	-28	-25	-22	-19	-16	-13	-10	-7	-4
21	-54	-51	-49	-46	-43	-40	-37	-34	-31	-28	-26	-23	-20	-17	-14	-11	-8	-5	-3
19	-52	-49	-46	-43	-40	-37	-35	-32	-29	-26	-23	-21	-18	-15	-12	-9	-6	-4	-1
17	-48	-46	-43	-40	-37	-35	-32	-29	-26	-24	-21	-18	-15	-13	-10	-7	-4	-2	1
15	-45	-42	-39	-37	-34	-31	-29	-26	-23	-21	-18	-15	-13	-10	-7	-5	-2	1	4
13	-41	-38	-36	-33	-30	-28	-25	-23	-20	-17	-15	-12	-9	-7	-4	-2	1	4	6
11	-36	-33	-31	-28	-26	-23	-21	-18	-16	-13	-11	-8	-6	-3	-1	2	4	7	9
9	-30	-28	-26	-23	-21	-18	-16	-14	-11	-9	-6	-4	-2	1	3	6	8	10	13
7	-24	-21	-19	-17	-15	-12	-10	-8	-5	-3	-1	1	4	6	8	10	13	15	17
5	-15	-13	-11	-9	-7	-5	-3	0	2	4	6	8	10	12	14	16	18	21	23
3	-4	-2	0	2	4	6	7	9	11	13	15	17	19	21	22	24	26	28	30

• Extreme wind and cold conditions can be viewed in the blue/grey area of the wind chill index chart.

- Checklists for fit/injured/weak cattle. All cattle appear healthy and no foot injuries are noted. Do not transport cancer eyes, debilitated thin animals, downers, or animals that appear sick.
- Emergency Action Plans. Create a list of contact people for each operation/location. Create a list of alternate delivery location(s) if cattle are in transit to the operation and they need to be cancelled or rerouted.

As we plan for our Dairy and Beef Quality Assurance programming this winter we should think about inviting our truckers and sale barn personnel to attend. By using best practices cattle haulers can save the dairy and livestock industry millions of dollars each year while providing high quality and safe beef to the consumer.

A printable version of the Master Cattle Transporter Guide can be found at:

http://www.livestocknetwork.com/master cattle transporter guide/master cattle transporter guide.pdf or on our website https://ncrat.cce.cornell.edu/.

If you would like a printed version of this brochure contact your local extension office.



## **Downing Acres Farm Tour**

By Betsy Hodge

Pat and Beth Downing and their son Michael are reformed dairy farmers. They rented a farm in Vermont and tried their hand at dairying and then bought their own farm in Burke on Rt 11 across from the Cherry Knoll restaurant. They milked cows there for awhile, but with the dairy business in a slump they decided to do something different. They sold the cows, but didn't want their farm to grow up to brush so they decided to try sheep, specifically, Katahdin Hair Sheep.



Adult ewes eating haylage in the feed alley of the Downings' new sheep barn. They started with a cable below the board to hold the sheep back, but have since replaced it with boards below and above for the sheep to reach through.

They enjoyed the idea of purebred stock and started small flock of Katahdins and kept careful records. They belong to the Katahdin Hair Sheep International Association (KHSI) and travel the country to attend their annual meetings. To make their farm more sheep-worthy, they modified the inside of the dairy barn, set up handling equipment, and did some fencing. Rotational grazing provided the feed for most of the summer and hay and haylage provided winter feed. Lambs were, and still are, fed a special grain designed to be fed free choice.

About a year ago they got an offer on their farm from a nearby dairy. The decision was made to sell the best land and build a new house down the road with a new barn designed for sheep. Then they got really crazy and decided to build a house and a barn at the same time while simultaneously taking care of their sheep in a new barn with no fences. They ended up with the land around the edge of their old property and a nice meadow for grazing the sheep. At the moment that meadow is not very handy, but with some additional fencing and good planning they can make it work. Like most new set-ups they are learning and making changes as they go.

The barn is 80 x 50 with a center feed alley, curtains for ventilation, and an insulated roof. It is divided into pens with swinging gates and there are heated waterers shared between the pens. Gates are a big challenge when using a bedded pack. Sheep need gates that are close to the ground because they can sneak underneath, but as the bedded pack builds up your gate can't swing because the pack is in the way. Beth found a great plan that mounts the gates on pipes so that they can be adjusted up and down as the pack builds up. Gates are currently attached at the feed alley side but are going to be changed to swing from the back of the pen to make sorting and moving and barn cleaning easier.

Handling the sheep is done along the outer wall. This year the Downings are adding solid plywood walls on their handling chute. The chute can be connected to their short section of commercial handling set-up with a guillotine gate on one end and the sort gate on the other end. There is a spot for the scale to fit into the chute before the sort gate as well.

The thing that sets the Downings apart is their dedication to good record keeping and taking advantage of the National Sheep Improvement Program (NSIP). By weighing lambs and keeping track of lineage they get back predicted differences in performance of their ram lambs which allows them to choose the best genetics to use for breeding. Their scale reads right into the computer and they use FlockFiler record keeping program for their records. The information can be loaded directly into NSIP making all that record keeping easier. By purchasing rams that have predicted performance and then using the sons of those rams carefully on different groups of ewes in their flock to prove them out, they have "proven" rams to sell for breeding stock.

Pat and Beth also willingly take part in several research projects, especially parasite management research with Cornell and other Universities.

The Downing's new barn was designed with efficiency in mind. They have a grain bin so they can have their grain delivered in bulk at a considerable cost savings. Their lambs receive free choice grain after weaning. This may sound dangerous, but it is a special grain with fermentable fiber so they grow fast, have a high dry matter intake, and don't get sick. Pastures are the main source of feed in the summer and haylage from a nearby farm provides winter forage. They built a small concrete bunk for weekly haylage delivery and use a tractor or skidsteer to feed it. Good feed bunk management is critical because sheep are sensitive to listeriosis. Pat often works away from home so it is important for Beth to be able to take care of the sheep by herself with some help from Michael.



A breeding group of ewes, and the new front of the feed alley for the ewes to eat through.

In the future, they need some good fences and gates around the barn and barn yard to make moving and grouping sheep easier. Being right on Rt 11 is challenging because they don't want loose animals on the road and they also have the public observing everything they do.

They have made a lot of progress in a year and are already making improvements. Their goal is to get to 100 breeding ewes. Their forward thinking attitude will take them far in farming and producing high quality sheep.



Farmers spent several hours asking Beth Downing about their new barn and farm operation.

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the second Monday of the month before you want your ad to appear. Publication is the first week of every month.

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# What's Happening in the Ag Community

Statewide Feeder School, Oct 31 and Nov 7, 2017 in Canton, and Nov 1 and Nov 8, 2017 at Miner

Feed Dealer Seminar, November 29 and November 30, 2017; see page 6 for more information

St. Lawrence County Dairy Day Program, December 13, 2017, Canton

Franklin County Dairy Day Program, December 14, 2017, Malone

Jefferson County Dairy Scene, January 23, 2018; see page 10 for more information

Lewis County Dairy Day Program, January 30, 2018

Save the Date - Cow Comfort Conference, February 6-7, 2018, Syracuse; see page 13 for more information

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