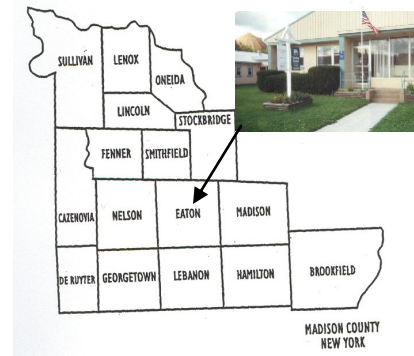


# Madison Manager



August 2011

## Upcoming Events



**August 24 - 17th Annual Northeast Buckwheat Field Day**, USDA\_NRCS Plant Materials Center Big Flats, NY. 1:00 - 3:30 pm. Field demonstrations of the effects of planting methods. The focus will be on achieving a good stand at minimum cost. In particular, methods that reduce the fuel requirement are being tested. How much flexibility do you have on planting date? Various planting dates will be on display. The farmer-to-farmer exchange of knowledge on production issues is always popular. More to be determined as the season develops! **Driving directions:** Take Rte. 17 east from Corning about 4 miles, Exit at Rt. 352 (Exit 48, East Corning), Follow Rt. 352 east about 1.5 miles, The PMC is on the left side of the road

**August 25– September 5, New York State Fair**, Syracuse

**August 25 - Raspberry High Tunnel Open House**, The open house will be held in Geneva, NY from 2-6pm. Cornell University's New York State Agricultural Experiment Station invites you to a Raspberry High Tunnel Open House featuring a primocane fruiting raspberry trial in a multi-bay commercial tunnel system at the Lucy-Robbins Farm in the town of Geneva, NY. Take the opportunity to tour the facility, sample fruit from the variety trial and the Cornell Raspberry Breeding Program and ask questions about high tunnels, production practices, pest control and other aspects of raspberry culture. Dr. Courtney Weber will host the event and be on hand to answer questions and offer insights into growing raspberries under high tunnels. The Lucy-Robbins farm of the NYSAES is located approximately 2 miles west of the Experiment Station at 3320 Sutton Rd. 0.9 mile south off County Rd. 4 (County Rd. 4 is North St. in Geneva on the North side of the Station). Sutton Rd. runs north and south between County Rd. 4 and NYS Routes 5&20. From Routes 5&20 turn north at the Time Warner Cable Offices approximately 1.5 miles west of the Geneva Walmart. The Open House is free and open to the public. Registration is requested for logistics and planning. Please register with Lou Ann Rago at (315) 787-2394 or [lar38@cornell.edu](mailto:lar38@cornell.edu). For questions or more information contact Dr. Courtney Weber at (315) 787-2395 or [caw34@cornell.edu](mailto:caw34@cornell.edu).

**September 16-17 - Madison County Hops Fest**, 435 Main Street, Oneida. For more information check out the web site: [www.mchs1900.org/hopfest/](http://www.mchs1900.org/hopfest/). To register for this event contact: Cornell Cooperative Extension of Madison County at (315) 684-3001 x 125, Lindsey McDonnell or email her at [lm523@cornell.edu](mailto:lm523@cornell.edu)

**September 17, Master Beekeeper Fall Course**, The beekeeper course will be held at Dyce Lab in Ithaca, NY. The Fall Course is a continuation of the Spring Course and is designed to build additional beekeeping skills. The Fall Course focuses on preparation for the fall flow, removing and extracting/processing honey, bottling and labeling, wax processing, identification and management of honey bee pests, and preparing the colony for winter. Participants receive a manual to complement the lectures. Class runs from 9am-6pm, with a total of 6 hours lecture/ discussion and 2 hours of field activities. Registration materials can be found at [www.masterbeekeeper.org](http://www.masterbeekeeper.org).

**September 18 - 20, New York State Maple Tour**, Lewis and Jefferson Counties tour centered in Lowville, NY. For additional information, contact Joe Alm at CCE - Lewis County at 315-376-5270. **Registration Due September 2, 2011**

**September 29 & 30 - Northeast Organic Dairy Producers Alliance 11th Annual Field Days & Annual Meeting**, NODPA's meeting will be held at the Cooperstown Beaver Valley Cabins and Campsites, Milford, New York. This two day event will highlight the internal and external opportunities and challenges for producers as demand for organic dairy products is on the rise and supply remains static.

# Information from Renovating/Upgrading Tie Stalls for Today's Dairy Cow

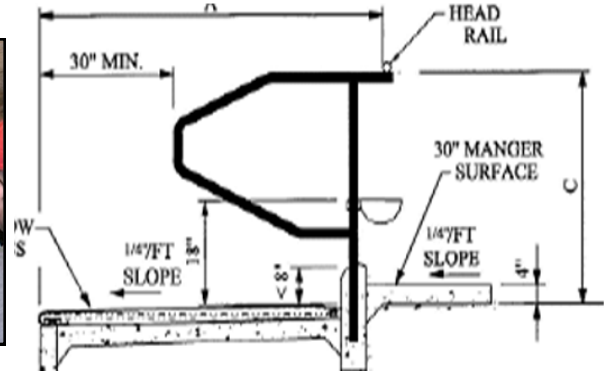
By Karen Baase, Extension Issue Leader

“Knowledge of cow measurements and their space requirements is necessary to design stalls.” That’s pretty basic. But so is knowing the current and speculating on the future size of cows in your herd. That’s the main idea behind research by Dr. Neil Anderson DVM from the Ontario Ministry of Agriculture, Food and Rural Affairs. Since dimensions on a cow are proportional, ratios provide reasonable estimates for stall dimensions for calves, heifers, and other dairy breeds. When lying down, Imprint length = distance between folded knee to tail; imprint width = point of the hock on the upper hind leg to the extension of the abdomen on the other side. Most new stalls being built use widths wider than the imprint width.\*



John Conway describes new tie stall design

Stall Dimensions, estimated relationships to body dimensions and example calculations for mature Holstein cows in a Canadian herd.		
Stall Dimensions	Ratio & Reference Body Dimensions	An Example A Median cow
Bed Length = Imprint Length	1.2 X rump height	1.2 X 60 = 72 in.
Tie Rail height above cows feet	X rump height	0.8 X 60 = 48 in.
*Stall Width = Imprint width +	2.0 X hook-bone width	2 X 26 = 52



## Fertilizer Sticker Shock

By Kathe Evans, Community Educator, CCE Madison County

If you thought inputs for this year’s crop were high, you are not going to like what experts predict it will cost to purchase fertilizer next spring - Think 2009. However there will be opportunities to get better prices.

According to Gary Schnitkey, University of Illinois economist cautions farmers to watch the changes in delivery price for nitrogen and in particular the April price. He says, “The contract price in July 2010

for fall delivery was 215 higher than the April 2011 cash price. Over the years 2008, 2009, 2010, the contract price was \$500 higher, \$120 lower and \$215 lower than the April price. According to the *farm gate blog*, current prices, as reflected in forward contracts researched by USDA’s Agricultural Marketing Service, will push fertilizer costs over the \$162 per acre mark for 2012. (For a look into historic fertilizer prices and usage, [check out these data](#) from the USDA Economic Research Service.) The potential for much higher fertilizer prices, once again highlights the

importance of soil testing and a plan for maximizing manure applications according to specific crop needs. Do give manure the credit it deserves as a source of fertility and spread it around to fields that need it - not just within sight of the barn. In addition count all credits from previous legume crops when growing corn. Research has shown that in some cases there may be a limited requirement for starter if there is sufficient carryover from previous crops. Go to <http://nmsp.css.cornell.edu/nutrientguidelines> for more information.

## Water Is King

By Kathe Evans, Community Educator, CCE Madison County

Unless there is a drought or the well fails, we often forget about the critical nature of a quality water supply for our livestock. Particularly when we have a few weeks as we had in late June and July any reduction in the quality and quantity of H2O can have negative effects on production from a growth or milk production standpoint. As the temperature rises, dry matter intake is

reduced while water intake can double per cow.

All water troughs should be inspected on a regular basis to make sure they are clean. Any trough should be deep enough so that animals can submerge their muzzles at least 1-2”, recharge flow should be at least 3-5 gallons per minute. Cool or cold water is best but clean water is absolutely necessary. Large capacity troughs should be cleaned on a regular basis. Some algae is harmful when

ingested and manure or other organic material can also contaminate troughs. If there are waterers out on pasture they should be inspected regularly for flow, cleanliness etc. The rule of thumb on pasture is to have water available no further than 500 ft away for dairy cattle or 800 ft for beef cattle.

Regular inspection of water buckets, troughs and tanks should be on everyone’s to-do list on a weekly basis.

# Management Considerations for Immature and Frosted Corn Silage

By: L. E. Chase and T. R. Overton  
Department of Animal Science Cornell  
University

The 2009 growing season in New York has again not been “normal”. Reports from around the state indicate that corn planted for silage is highly variable around the state. In some areas, corn maturity stage and potential yields appear to be very good. In other situations, corn is behind normal maturity. This variation in maturity status is evident within fields and between fields in the same area. Some corn was also flooded in parts of the state. There is a good possibility that least some corn planted for silage will not attain “normal” maturity at harvest unless we get a large number of growing degree days and a late frost. However, an early frost will increase the acres of immature corn harvested as silage.

What do we do in this situation? The key is to remember and apply the basic principles for harvest, storage and feeding of the 2009 corn crop. We have been through this same scenario a number of times in the last 10 years so many people have some experience in managing this situation. The key points to concentrate on for the 2009 corn crop are:

## A. Harvesting

- a. Do everything possible to harvest corn silage at the **right dry matter content**. The target range for harvest is 32 – 38% DM (62 – 68% moisture).
- b. Harvesting at the right DM increases forage yield, dry matter intake, forage digestibility, milk production and profitability.
- c. **Use whole plant dry matter** to determine when to harvest. With many of the newer hybrids, milk line **is not** a good indicator of when to harvest.
- d. It has been shown that the plant DM value obtained with a Koster tester is about 2 units higher than actual plant dry matter. A 33% DM determined with a Koster is really about 31%. Keep this in mind when interpreting the results and deciding when to harvest.
- e. Whole plant dry down rates is about 0.5% per day in September. You can use this as a gauge for harvesting. If

your corn silage is 28% DM today, it will be about 10 days until it reaches 32% DM. Since the dry down rate can be variable, you should double check whole plant DM before starting harvest.

- f. Forage harvester settings:
  - i. If using a processor, theoretical length of cut (TLC) should be 0.75 inches.
  - ii. Set the processor rolls with an opening of 1-3 mm.
  - iii. If not using a processor TLC should be 0.25 – 0.5 inches.

## Monitor what’s actually coming out of the Harvester!

i. There are too many factors (hybrid, stand density, DM, maturity, field speed, etc.) that determine the **actual** particle size of the material leaving the chopper. The only way to know if the settings are right is to monitor particle size and kernel breakage. Guidelines are:

1. Penn State particle separator
  - a. 2 screens + pan
    - i. Top screen = 10-2
    - ii. Middle screen = 40 –
    - iii. Pan = < 40%
  - b. 3 ns + pan
    - i. Top screen = 5-15% of the Total weight
    - ii. Second screen = > 50%
    - iii. Third screen = < 30%
    - iv. Pan = < 5%
2. Kernel breakage – The goal is > 90% of kernels broken or damaged.

J. Adjust chopper settings if particle size or kernel breakage is not meeting the above guidelines.

K. You should recheck these measurements frequently since things like hybrid, stand density, maturity and DM will change both particle size and kernel breakage with the same settings.

## B. Storage

- a. If you have both “normal” and immature corn silage, try to store them in separate silos or Ag-Bags. This provides flexibility

at feeding time.

- b. Store any BMR corn silage in a separate silo.
- c. Make sure you have enough packing tractor weight. The thumb rule is 800 lbs. of packing tractor weight for each ton of silage put in the bunk per hour. If you have a fill rate of 100 tons/hour, you would need 80,000 lbs. of tractor weight.
- d. If more than 1 packing tractor is needed, make such the silo is wide enough for both tractors to work at the same time.
- e. Pack thin layers (6-8 inches) if possible.
- f. Consider covering the bunker walls with plastic on the inside to minimize air infiltration through cracks and joints.
- g. Seal the silo with plastic sand tires or the new lower oxygen permeability covering material.
- h. Consider the use of a research proven bacterial silage inoculant or acid preservative to assist in improving fermentation efficiency and dry matter recovery. Ask for research data that supports the product claims.
- i. Handle and use the product according to directions from the supplier. A number of things can decrease the effectiveness of bacterial products. These include improper application rates, the water use to mix the material, water temperature in the tanks and how long the product has been mixed up.

## C. Feeding considerations

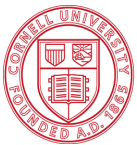
- A. If possible. Let the corn silage ferment for 3 – 4 months before feeding. This will minimize the typical “October to December” ration adjustments and lower milk production associated with feeding “new” corn silage.
- B. The weather conditions during the 2009 growing season make it difficult to predict digestibility and feeding value of the corn silage produced. The following forage sampling and analysis schedule should help:
  - i. Take samples at the time of harvest and analyze then for DM, CP, NDF, starch and NDF digestibility. This will provide a base or starting point for planning

- ii. At feeding time, feed off the front part of the silo to less sensitive groups (late lactation cows, far off dry cows, bred heifers) until you reach a good silo face.
- iii. Take samples from a number of places on the face, composite and send in for wet chemistry analysis of DM, CP, soluble CP, NDF, starch, NDF digestibility and fermentation profile. Your feed professional can use this information to adjust rations and take maximum advantage of your silage.
- iv. Repeat this sampling procedure at least monthly until the results become stable. It may take 3-6 months for this to occur.
- v. **Observe safety precautions when working around the silo face. Don't approach the face if there**

**are overhangs, etc. Always have a second person at the silo (but not at the face) in case you get buried. Make sure they know how to dig in and get you an airway for breathing. Have a cell phone available to call for help.**

- vi. An alternative is to use the front end bucket or silo facer to knock down forage. Remove this silage a safe distance from the face and then take your samples.
- vii. When you start feeding the 2009 corn silage, take 1-2 weeks to transition between the old and new corn silage. This will minimize potential fermentation and nutrient changes in the ration. Cows like consistency of both feed and nutrients!

**Summary:** Harvesting corn for silage in 2009 will be challenging in some situations due to the need to handle immature or frosted corn. The harvest and silo management principles used for harvesting "normal" corn silage still apply in these situations. The most single critical step is to use whole plant DM determinations as the base for determining when to start harvesting. Once chopping has started, check corn forage particle size and kernel damage to determine if the chopper settings are correct or need adjusted. Fill the silo fast, pack, and seal the silo. This should provide the best quantity and quality of corn silage to use in your feeding program over the next year.



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## ***Building Strong and Vibrant New York Communities***

### **Madison Manager**

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