

AGRICULTURAL NEWS

Chemung, Schuyler, and Steuben Counties

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Keys to Silage Harvest Success

Paul H. Craig, CCA
Dauphin County Extension

Moisture Level at Harvest

Probably the most critical condition for proper silage harvest is the whole plant moisture level. Silage feeding trials show the best performances when silages are harvested from 65% to 68% moisture. Unfortunately at higher moistures, seepage and poor fermentation can cause additional feeding challenges. Each storage type has specific moisture guidelines for producing best quality.

Storage Type	Optimum moisture content
Bunkers/Piles	65–67%
Bags	62–67%
Concret Uprights	62–65%
Sealed Uprights	50–60%

Determining Moisture Level

Visually looking at a corn plant is not an accurate method to determine harvest. A starting point to begin monitoring plant moisture levels is when the ear begins to dent. At this stage sugar in the kernel is being converted into starch and the kernel begins to shrink. When the milk line, which shows the change from milky starches to hard starch in the kernel, is 1/2 of the way down the kernel, whole plant moistures will be close to optimum moisture levels, on average 63%. Unfortunately crop moisture levels can vary greatly across hybrids and locations at 1/2 milk line, (ranges – 53 to 73%). Do not depend on this method for accurate moisture levels. The best method is to cut representative stalks, shred them and run an accurate moisture determination test.

After denting, whole plant moisture levels will decrease approximately 0.6% per day. Silage harvest can be predicted but additional monitoring of moisture will be needed. As plant moistures approach 62%, the dry-down rate rapidly increases. Don't get caught with silage that is too dry.

Length of Cut

Recommendations for length of cut for silage vary depending on crop condition. Drier crops should be cut finer to produce smaller particles that minimize air pockets. Use of highly digestible hybrids requires a slightly longer cut to maintain effective fiber. General recommendation for corn being chopped for silage without processing is a 3/8 inch theoretical length of cut (TLC) but more mature crops may require a shorter length. For processed corn silage the recommended chop length is 5/8 to 3/4 inch TLC. Some farms rely on their nutritionists to fine tune the chop length based on farm specific conditions.

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Cornell Cooperative Extension

Steuben County

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Trading Post

Do you have items you wish to buy, sell, or rent? Send us your ad by the 25th of the month preceding publication; there is no charge to advertise in the Trading Post.

For Sale:

May 2010 alfalfa baleage. 100 – 4 x 4 (1000 lb.) bales. Forage test available. Also, 4 year old registered Angus bull. Phone: 607-962-1477.

For Sale:

John Deere three point hitch hay rake and 1st and 2nd cutting hay. Phone: 607-776-4858.

For Rent:

Haybuster no-till seeder drill. Ten feet wide with three compartments, (small seed, large seed and fertilizer) and acreage meter. Delivery possible or renter can pick up. The charge is \$20 per acre with a minimum charge of \$50. A deposit is required. Call 607-769-1413.

For Sale:

- 4-Feeder wagons slant bar 50-hole 27'.

- Harsh mixer stationary – Model 290 232 bushel with electronic scales, 4 auger, stainless steel bottom.
 - 2 model 30 New Holland 1000 rpm blowers.
 - Brillion 10' seeder.
 - Lock up 44' cow / 70' calf.
 - 8 SSTII Auto rope take off and Boumatic claws.
 - Large quantity of H.D. 1 ¼ black pipe 160 psi.
 - Houle 21' manure pump/agitator 540 rpm 3 pt.
 - 20' Ring Drive Badger silo unloader.
 - Plate cooler universal 81 plates – expandable.
 - Gates many sizes. H.D. and light weight V.G.
 - Hydraulic bale grabber for front end loader.
 - Energy free waters – 9.
 - Reel Augie portable mixer – Model 2300 electronic scales.
 - 25.4T soy bean bin hopper bottom schald Model 90D12.
 - Patz elevator 30' single chain #62 blue 10" wide.
 - Bedding chopper 8 hp.
 - Gandy applicator 3-hole M-903 12V.
 - 2 manual Lancaster silo distributors.
 - Calf supplies. Refractromete/Dehorner Butane/Colostrometer.
 - Digital thermometer, electronic, M-500-550 (GLA).
 - Udder flamer.
 - Set of freeze branding irons 0-9.
 - New Holland 892 chopper, 1000 rpm, 3RN corn/keyhead parts.
- Phone: 607-857-4610.

Steuben County
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Coming Events

September 9 - Solar/Wind Pumping System at Barter Farm, 10:00am – Noon, Barter Farm, 8319 Ford Rd., Branchport, NY 14418 (Steuben County). Jonathan and Juanita operate a 210 acre livestock farm (40 Angus cattle and 130 Cheviot and Dorset sheep). The Barters have recently installed a combination wind and solar pumping system which supplies water to 58 acres of pasture. The pumping system consists of a 350 watt turbine, 160 watt solar panels, back up batteries and a deep well pump. Partial funding for this project was provided by USDA – Natural Resources Conservation Service's Conservation Innovative Grants program. Co-sponsored by the Finger Lakes Resource Conservation & Development Council and the Cornell Small Farms Energy Work Team. To register, contact Violet Stone at 607-255-9227 or VWS7@cornell.edu.

To learn more about the small farms energy resources, visit

<http://www.smallfarms.cornell.edu/pages/resources/production/energy.cfm>.

For more information on a variety of small farm topics visit www.smallfarms.cornell.edu.

September 25 – Farm-City Day, Burns Family Farm, Rose Hill Road, Fremont, NY, 10am to 3 pm. For more information visit www.steubencountyfarmday.com.

October 9 – Small-Scale Woodlot Management, 9 am to 1 pm, Tony and Anne Ross, 7120 Marrowback Road, Conesus, NY. Learn how to create a felling plan, observe directional felling techniques and observe ATV and arch use for moving sawlogs and firewood. Participants should dress for the weather. Registration is limited and receiving the \$10 per person registration fee by Friday, October 1, 2010 is appreciated. Please send your check to WFL chapter of NYFOA Treasurer Ron Reitz, 6086 Canadice Hill Road, Springwater, NY 14560. For more information contact Dean Faklis at 585-669-2956, dfaklis@frontiernet.net, or Tony Ross at 585-288-4821 (home) or 585-943-2109 (cell) aaross@frontiernet.net.

continued from cover.

Height of Cut

In recent seasons some producers are cutting silage at a 10 to 20-inch height. This practice reduces silage fiber and lignin percentage and increases starch and energy content. However silage yields are reduced five to ten percent. Higher chopping can also be used to change whole plant moisture contents. By cutting higher, harvest may advance by 3 to 4 days. Higher chopping may be an option if excess forage dry matter is available. However, this will increase the final cost per ton. To balance this trade-off between quality and yield, the decision should be based on an economic assessment.

Processing Silage

At lower whole plant moistures, crop maturity may affect silage quality. Fiber and starch digestion decreases as corn dries down. Processing at harvest may be needed to maximize digestion on more mature crops. The goal of processing is to ensure breakage of the kernel and cob to assist digestion. Processing also can affect fiber length so choppers equipped with a processor typically lengthen their cut to ¾ inch. Recommended processor setting for corn silage is 1 to 3 mm depending on the TLC and the moisture of the crop. Drier corn requires more processing (i.e. 1 – 2 mm).

Stall Design and Bedding Affect Lying Time

and Variation


Peter Krawczel

Miner Institute

The importance of rest for the productivity and well-being of dairy cows and calves continues to be evaluated in research trials across various institutions. The recently held annual conference of the American Dairy Science Association provided researchers an opportunity to share their work. A few studies that furthered what we know about lying behavior are summarized below: Stall design and availability influence lying time. There appears to be two key factors in stall design that promote lying time: the diagonal length from the neckrail to the curb and the height of the curb. There was a positive relationship between the diagonal length of the stall and resting time. Similarly, cows in stalls with curbs less than 10-inches rested for two hours more per day than cows with access to stalls with a curb height greater than 10-inches. Finally, both stall and feeding space availability were positively associated with resting time.

This is similar to what we've observed in the stocking density trials conducted at Miner Institute. Increasing the number of available stalls or feeding spaces improves lying behavior. Mattress - based stalls result in greater variability than deepbed stalls. A comparison of mattress based versus deep bedded stalls found that daily lying time was unaffected, but there was greater variation in lying time for cows housed with mattress-based stalls. The variation was relatively small (only 0.3 of an hour) but very consistent. Furthermore, cows in mattress-based stalls spent more time standing with two feet in a stall.

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Straw bedding may increase fly larvae in calf

hutches. A comparison of bedding calf hutches with straw, sand, or sawdust came to a somewhat confounded conclusion. Fly counts were the lowest in hutches with straw bedding, but fly larvae counts were the greatest in those hutches. It was concluded that any of three bedding types were acceptable for calves; however, the potential for the greatest number of flies existed in the straw bedding (despite the lowest number of actual flies observed). This suggests that effective fly management is critical regardless of bedding type used.

* References: Bach, A. and I. Guasch. 2010. *Resting* patterns of dairy cows and housing characteristics. J. Dairy Sci. Vol. 93 (E-Suppl. 1):15. Gay, K. D., S. D. Eicher, C. S. Wilcox, J. A. Bridges, H. M. Rostagno, S. E. Charley, M. J. Grott, R. E. Williams, and M. M. Schultz. 2010. Effect of bedding material on flies, and behavior and innate immunity in calves reared in hutches. J. Dairy Sci. Vol. 93 (E-Suppl. 1):611. Ito, K., M. A. G. von Keyserlingk, and D. M. Weary. 2010. Lying and standing behavior on farms using deep-bedded versus mattress freestalls. J. Dairy Sci. Vol. 93 (E-Suppl. 1):16.

Beef Cattle Comments

Mike Baker

Beef Cattle Extension Specialist, Cornell

Profit Optimization and Evaluation Programs

- a) Cornell Feedlot and Carcass Value Discovery Program – EARLY BIRD ENROLLMENT BY SEPTEMBER 15 \$30, AFTER SEPTEMBER 15 \$35/head.

Purpose: Teach cow/calf producers the value of their calves based on performance in the feedlot and on through the packing plant. Cattle can be fed conventionally or “natural” and marketed accordingly. Calves are accepted in November and fed until their most optimal profit potential during March-July. For more information contact Mike Baker, Cornell Beef Specialist mjb28@cornell.edu, 607-255-5923 or www.ansci.cornell.edu/beef

- b) Empire Heifer Development Program – EARLY BIRD ENROLLMENT BY SEPTEMBER 15 \$30, AFTER SEPTEMBER 15 \$35/heifer.

Purpose: A management and marketing program for

cow/calf producers to evaluate replacement heifer prospects and offer a marketing opportunity for quality heifers. Calves are accepted in November. Heifers can be bred artificially at the heifer rearing facility, or returned home for breeding. Eligible heifers can be sold in April. For more information, contact Mike Baker, Cornell Beef Specialist mjb28@cornell.edu, 607-255-5923 or www.ansci.cornell.edu/beef

- c) Cornell Beef Replacement Sale – Consignments due September 15.

Purpose: To 1) add value to quality bred commercial and purebred females 2) supply a source of high quality commercial and purebred replacement cattle bred to calving appropriate bulls and 3) provide an opportunity for Cornell undergraduate students to gain real world experience through organizing and facilitating a beef cattle sale. Sale date is October 30, 2010. For more information, contact Mike Baker, Cornell Beef Specialist mjb28@cornell.edu, 607-255-5923 or www.ansci.cornell.edu/beef

Vaccination Protocol for Weaning Calves

<u>Effective</u>	<u>Vaccine Schedule</u>
	a. <u>Six weeks prior to weaning:</u> initial vaccine. Use only vaccines approved safe for calves nursing pregnant cows.
Best	b. <u>Three – four weeks prior to weaning</u> administer vaccines requiring a booster.
	a. <u>Two - three weeks prior to weaning:</u> initial vaccine.
2nd Best	b. <u>At weaning,</u> administer vaccines requiring a booster.
	a. <u>At weaning</u> or two weeks post-weaning: initial vaccine.
3rd Best	b. <u>Two – three weeks later,</u> administer vaccines requiring a booster.
USELESS:	Killed vaccine at weaning with no booster

Always check label information and consult with a veterinarian regarding safe vaccine use in pregnant animals. If used incorrectly, ABORTIONS may result. Modified live vaccines including a BRSV fraction generally recommend a booster for BRSV.

"To ensure optimal health of your animal(s), there are multiple diseases that your bull(s) are to be vaccinated for. At a minimum, this will require four separate injections (plus one injection for Selenium), some of which will need to be boosted 2 to 4 weeks following the initial injection. **To design the best protocol for your farm consult your herd veterinarian.**" Vaccine requirements:

- (1) **IBR, BVD, PI3, BRSV**
- (2) **Mannheimia haemolytica** (formerly *Pasteurella haemolytica*)
- (3) **Haemophilus somnus**
- (4) **Pasteurella multocida**
- (5) **Selenium**
- (6) **7-way Clostridial**

Wanted: Quality Replacement Heifers

If you would like to diversify market for your pregnant commercial or pure open and bred heifers, consider the **Cornell Beef Replacement Sale**. This sale was started to add value to heifers that graduated from the Empire Heifer Development Program. It is now being expanded to include similarly developed farm raised heifers.

The sale is facilitated by students enrolled in Cornell University **Beef Cattle Merchandizing** class. Get the best bang from your marketing dollar by enlisting the enthusiasm of 35 students to sell your quality replacement heifers.

There are **requirements** to assure the buyer that the risk of calving difficulty has been minimized and that performance has been optimized. Requirements include being sired by a registered beef bull, a body condition score ≥ 5.0 , negative test for BVD, brucellosis and TB and properly vaccinated for BVD, PI3, BRSV and IBR. Bred heifers are to be veterinarian checked pregnant to a known calving ease EPD sire.

Ultrasound data will be collected on heifers while at the Cornell Beef Teaching and Research Center. **Sale date:** Saturday, October 30, 2010. Cornell Beef Teaching and Research Center, Dryden, NY.

For more information: Mike Baker, Cornell Beef Extension Specialist, mjb28@cornell.edu, 607-255-

5923.

Cornell Replacement Heifer Sale
October 30, 2010
Cornell Beef Teaching and Research Center
Project of
AS 4700 "Beef Cattle Merchandizing"
Cornell University Department of Animal Science

TO DO SEPTEMBER/OCTOBER

1. Consider marketing options for feeder cattle:
 - ◆ Special feeder calf sales, contact local sale barn for details
 - ◆ Retained Ownership, contact Mike Baker, 607-255-5923
2. Line up supplies for fall roundup and weaning. Consider the following:
 - a) Enroll your herd in the Cow Herd Appraisal Performance System (CHAPS) record keeping system. This program provides important data on the productivity of your cows based on the performance of their calves. Contact your local Cooperative Extension Agent, or call 607-255-5923.
 - b) Buy ear tags to identify replacement heifers and cows.
 - c) If deemed necessary (consult your veterinarian to do a fecal egg count) worm cows and bulls.
 - d) Apply lice and grub control before November 5.
 - e) Vaccinate calf crop for IBR, BVD, PI₃, BRSV, Pasteurella, Mannaheima, Clostridia spp., and Haemophilus somnus. If using a modified live vaccine, this must be done after calves are weaned. Killed vaccine products can be used on nursing calves.
 - f) Treat calves for worms and grubs and supplement with selenium.
3. Pregnancy test and cull all open cows.
4. Cull problem cows and marginal producers. Production data is easily obtained using CHAPS.

5. Take forage sample for nutrient analysis. Depending on your locality, hay may be in short supply or of poor quality. Allocating the best feed to younger, higher producing animals will stretch out your supply. Contact local Cornell Cooperative Extension office for information.
6. Consider taking soil samples and top dressing fields requiring lime, phosphorous and/or potash. Clip pastures to cut back weeds such as thistle; patches of thistle can be weakened or controlled by spot spraying with 2,4-D or Banvel/Clarity, or mixture of the two. Foliage must be green and actively growing. An application of 25 pounds of actual nitrogen to mostly grass pastures during the first week of September can help to boost fall regrowth for stockpiling forage for late fall use.

Fly Traps for Biting Flies Attacking Animals on Pasture

Keith Waldron
NYS IPM

Several fly pest species can attack cattle while they are out on pasture including horn, face, stable, horse and deer flies. Each fly species has distinctive habits, life histories, and management options. Fly traps are one tactic that can help *reduce* the numbers of horse, deer and stable flies, all common biting flies that attack and cause stress to animals on pasture.

Alsynite Trap

A cylindrical fiberglass sheet reflects light in a way that is particularly attractive to **stable flies** but will attract **house flies** also. Sticky translucent fly paper is wrapped around the outside and replaced when saturated with flies. Place out of reach of animals in a sunny location since they attract flies by visual means. The trap is should be set 1 to 2 feet above the ground and placed about 10 feet from building walls or on pastures in those areas where the animals will be concentrating, such as near water sources.

Horse Pal

This trap is specifically designed to attract and catch

horse, deer, and stable flies by mimicking the underside of a cow. Flies land on the surface of a swaying dark sphere, migrate up toward the light in the screened area, and are ultimately trapped in the jar on top. The collection jar is removed periodically and emptied. Begin by placing 1 to 2 traps in the field and increase as necessary. Traps should be placed near, but out of reach of curious animals to prevent damage.

Epps Trap

Biting flies, such as **stable, horse, and deer flies**, are attracted to the large shape of the Epps Trap made to resemble a cow. Biting flies tend to circle their host before landing for a meal and perceive the clear plastic spaces of the trap as open space under the animal. They fly into the clear plastic and ricochet into trays of liquid where they drown. Maintain the trap by skimming dead insects from the liquid and replacing the liquid when fouled. Mow weeds beneath the trap to preserve the contrast between light areas and dark. Traps work best placed in a sunny part of the pasture near historic fly problem areas. Use one trap per 20 acres of pasture, or place in a sunlit spot outside stables. Placing the trap out of reach from curious livestock is highly recommended.

Information on pasture fly management including pictures of various fly traps can be found in our publication Integrated Pest Management Guide for Organic Dairies (http://nysipm.cornell.edu/organic_guide/default.asp).

For more information see: *Pest Flies of Pastured Cattle and Horses* (<http://nysipm.cornell.edu/factsheets/dairy/default.asp>)

The Phase Out of Sulfur in Farm Fuel

Thomas Gallagher
CCE – Albany County

I am sure many of you remember back just a couple of years ago when the allowable amount of sulfur in diesel fuel was lowered from 500ppm to 15ppm. Fortunately when this law went into effect, off road agriculture engines were exempt and were allowed to continue using the low sulfur fuel containing

500ppm of sulfur.

The time has now come when agriculture will have to transition over to ultra low sulfur diesel fuel which contains 15ppm of sulfur. Early June 2010 marked the beginning of the next step down phase for off road engines, that was the date when refineries were supposed to transition over to only ultra low sulfur fuel. Farms will need to be fully transitioned over by October 2010. I don't know about you but I was thinking this switchover wouldn't happen for a couple of more years. That is not the case.

If you feel that your older engines on the farm are in need of the 500ppm of sulfur, I would encourage you to call your fuel dealer right away and get your tanks filled. Once the dealer runs out, chances are there will be no more low sulfur fuel available. If you have several new tractors on the farm (not likely) the low sulfur fuel (500ppm) could actually do some serious damage to the exhaust system, so you might want to make the switch to the ultra low sulfur fuel now.

There may be or should I say will probably be one problem when you switch to the ultra low fuel; that is some fuel suppliers will only offer clear on road fuel as opposed to the dyed tax-exempt fuel. This will mean that farmers will have to pay the federal taxes up front and then file for a refund. State taxes should continue to be exempt up front.

Before the changeover to the ultra low fuel takes place I would suggest you check with your local mechanic to see what impact it will have on your older engines.

I would like to thank John Tauzel of the New York State Farm Bureau for sorting all of this out and allowing me to get you this information in a timely manner.

Better Insect Control When Air is Pulled Down through Grain Bins

Jan Suszkiw

Agricultural Research Service, USDA

Aeration, blowing ambient air through grain storage bins, has been used for decades to maintain the quality of grain by keeping it cool, as well as to manage stored insect pests. But few recent studies have examined whether it's better to direct air from

above or below as a means of using temperatures of 60 degrees Fahrenheit or below to control insects.

To find out, U.S. Department of Agriculture (USDA) entomologist Frank Arthur and agricultural engineer Mark Casada experimented with storage bins whose grain masses were cooled with either pressure aeration or suction aeration. Pressure aeration uses fans to push ambient air from the bottom of the bin upwards, while suction aeration involves reversing the fans to pull air from the top downward.

Arthur and Casada work at the Agricultural Research Service (ARS) Center for Grain and Animal Health Research in Manhattan, Kansas. ARS is USDA's chief intramural scientific research agency.

The researchers conducted two eight-month trials using six metal storage bins with perforated floors and grain storage capacities of 1,250 bushels of wheat. Stored insects examined in the study were rusty grain beetles, foreign grain beetles, hairy fungus beetles, red flour beetles, saw-toothed grain beetles, rice weevils and lesser grain borers.

The data showed that, during the summer, suction aeration cooled the stored wheat's upper portion, or "surface zone," more quickly than pressure aeration, and that the difference correlated to fewer insect pests. For example, in pressure aeration-cooled bins, 3,290 rusty grain beetles and 8,210 red flour beetles were found in surface-zone traps, versus 662 and 722 respectively in suction aeration-treated bins.

Suction aeration's rapid cooling of the grain's surface zone is advantageous because that's where insects initially infest the grain after flying in from outside, according to Arthur.

Larger-scale studies are needed, but one expected benefit to using suction aeration could be reduced reliance on the fumigant phosphine to control insects.

The research, published in the journal *Applied Engineering and Agriculture*, supports the USDA priority of promoting international food security.

Alfalfa Quality

Ev Thomas

Miner Institute Farm Report

There's only so much that can be gained from increasingly intensive harvest management of alfalfa. We've come a long way since when farmers were advised to wait until early bloom for first cut and then wait 6 to 7 weeks between harvests. This was a decent recipe for good yields and long stand life, but resulted in high fiber, low digestibility forage. Good for cows milking 50 pounds, perhaps, but now the more aggressive crop managers are already harvesting every cut at the bud stage and decreasing the harvest interval much further risks lower yields and reduced stand life.

Enter the alfalfa plant breeders who have been busy as bees, trying to improve alfalfa quality "from the ground up," so to speak. And from the results of recent trials at Cornell University, they're making good progress. There are already some varieties on the market promoted as having higher forage quality. Recently published data showed that for a group of high quality varieties, NDF content was lower and digestibility higher, with little negative impact on yield. (The Cornell data showed a slight decrease in first cut yield, but no difference in 2nd or 3rd cut yield.)

Editor's Note: Alfalfa-grass quality can also be improved by more frequent crop rotation and reseeded. It is not uncommon to see a high percentage of alfalfa in the better-drained areas of fields, and mostly grass in areas with heavier soils or low spots. On these variable drainage fields short rotations and tiling out the wet spots can really help. Be sure to supply adequate potash for winter from commercial sources or dairy manure.

Potato Update

Carol MacNeil

CCE-Cornell Vegetable Program

Vine-killing and some harvest continued during the past week, though weekend rains, in some cases very heavy rains, have halted progress and are likely

to increase pink rot (PR) and bacterial soft rot (BSR) incidence.

The weather this past weekend was extremely favorable for the development of late blight (LB) with well over 6+ LB severity values (SV) accumulated in the past week at the vast majority of weather stations. This indicates the need for a strict 5 day fungicide spray interval. With cool night temperatures and shorter days wetting periods and thus SV accumulations will tend to increase, putting the crop at greater risk for the spread of LB. Many areas/states have reported increases in LB incidence in the past couple of weeks. Continue to scout carefully. There's no substitute for catching LB infection very early so an aggressive, tight spray program with LB fungicides can be started. While it is suspected that the potato LB in Yates Co. is US8 that cannot be determined with certainty at this time.

If your potatoes are beginning to mature and you're not fighting new LB infection on large vines, consider using Revus Top, Ranman or Tin for their effectiveness in protecting tubers.



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Keep in mind that complete vine-killing stops the growth and sporulation of LB in the foliage. The LB organism can only survive on live tissue. Vine desiccation should kill vines completely to prevent the inoculation of tubers with LB spores during harvest. While any green tissues survive treat the field with a fungicide. Living plant parts can become infected by LB – causing tuber infection through the stolon or causing tuber infection by spores washed from stems into the soil during rain. Vine desiccation should precede harvest by 21 days to promote skin set, and to minimize skinning and bruising during harvest which can lead to infection by a number of tuber diseases and subsequent decay.

Remaining Tuber Bulking Potential (*A.J. Bussan, University of Wisconsin – Madison*) - Questions are arising about the bulking potential of the crop. This is a crucial and important question at this time due to the cost of continued fungicide applications in contrast to benefits of early vine kill for minimizing any further disease development and spread. Potato bulking begins to decline as the stolons start to break down and detach from the tubers. Researchers have observed break down of stolons beginning as soon as vine senescence is observed (10 to 15% loss in vine health). Once vine senescence is 50% then there is likely little potential for continued bulking. If little bulking potential remains then growers should consider vine killing the crop to prevent infection by LB and to improve skin set. The disadvantage of early vine desiccation is that some fields will lie for weeks before harvest for storage.

Reducing Potato Bruise Damage at Harvest (Ken Schroeder, University of Wisconsin Extension) – Mechanical damage and bruises caused by rough handling during harvest, trucking and piling into storage increase storage rots and reduce quality. The main factors influencing the amount and severity of bruise are soil conditions; tuber conditions; equipment maintenance, adjustment, operation, and modifications; and, magnitude of impact. The percentage of bruise-free potatoes will be greatest under near ideal temperature and soil moisture, and when the volume of material flowing

through the harvester is near its capacity. Soil needs to be moist, not too dry and not too wet. Tubers need to be mature with good skin set, and they need to be hydrated. Pulp temperatures should be between 45 and 60 degrees F, with a minimum temperature of 50 degrees for high dry matter varieties prone to shatter bruise.

What about the harvester? The most important factor influencing bruising is the ratio of *ground speed to conveyor speed*. Conveyors need to be kept full of potatoes, or potatoes and other material (soil and vines). Proper *digger blade* angle and depth are important to ensure smooth flow of tubers and soil onto the primary conveyor and to avoid slicing. Additionally, check individual *conveyor speeds* relative to preceding and following conveyors and adjust to maintain adequate loads without overloading and causing rollback. *Deviner chains* need to be properly adjusted to prevent tubers from bouncing and tumbling upon entering the secondary conveyor. Bruising frequently occurs on harvesters and windrowers when tubers strike the links of the deviner chain. Check *rear crossover chain covering* to be sure it is adequate and in good condition to reduce bruising. Due to the length and slope of the *side elevator*, tuber rollback and injury often occur. Flight intervals should be adjusted to minimize rollback. Use of hugger belts can also reduce tuber roll. Also check for tuber pinching along the edges. Reducing rollback on the boom conveyor can be accomplished by using hugger belts or installing flights with stiff ends every 12 to 16 inches. Lastly, the harvester operator must keep the drop distance from the boom to the pile in the truck or box as short as possible without touching the pile. Use of electronic boom control devices will control drop distance, allowing the operator to focus on other details.

Precut Rye Straw

Ev Thomas

Miner Institute Farm Report

There's always a good market for straw in much of the Northeast, especially where small grains aren't a common crop. And when there's a good market for a commodity there's often a very good market if that commodity is of top quality—and that defines precut

rye straw. The name itself is a misnomer because the rye is indeed cut (mowed) but it's not run through a combine to remove the grain. Here's a how-to: • After corn silage harvest but before mid-October drill about 2.5 bushels/acre of winter rye. Earlier is better. Broadcasting the rye might work, but there's enough profit potential in the crop to make drilling worthwhile. A no-till drill is also OK. The rye will start growing almost as soon as you leave the field, and will tie up nitrogen left over from the corn crop plus reduce soil erosion. The rye will be among the first plants to green up the following spring. Rye has the ability to scavenge leftover N, so if the field has a recent history of manure applications, you may not need to apply N. If you need supplemental N, apply 100-200 lbs urea/acre soon after the rye starts to grow in the spring. Mow the rye just as it heads, but before the seeds start to develop. At that stage the crop will be very green, so you'll want some rain showers to bleach it out, tedding as needed to prevent mold or discoloration. This is about the only time that after mowing a crop you actually want it to rain! A couple of showers followed by sunny weather will bleach the crop to almost white. In the two years we harvested pre-cut rye at Miner Institute we got between 1.5 and 2 tons/acre, but I've heard of 3 ton yields and rumors of 4 tons/acre though the latter number seems like a stretch. But consider the out-of-pocket cost per acre: A couple of bushels of seed, baler twine and perhaps some N fertilizer; everything else is labor and equipment.

Because pre-cut rye straw hasn't been through a combine the stems remain long and livestock can be bedded up to their bellies. Great stuff for cattle at fairs and for horse people, who are used to paying top dollar for almost everything they buy. Tractor trailer loads of pre-cut rye straw have sold for at least \$100 per ton out of the seller's barn, and I'd expect top quality small square bales to sell for \$150 per ton or more to the horse set.

Another option, one promoted by Tom Kilcer from Advanced Ag Systems, is winter triticale, seeded at 100-125 lbs/acre and harvested either as forage or straw. Tom says that winter triticale produces more forage than does rye, so it would probably produce more straw. Drill triticale in late August or very early September for best winter survival. Of course, this makes drilling into corn silage stubble impossible

unless you plant a very early-maturing corn hybrid.

It's probably occurred to you that pre-cut winter rye has the potential to really screw up a crop rotation, since by the time you get the stuff baled it will be on the late side for corn planting. However, you can no-till into rye stubble, so the turnaround from rye to corn can be pretty quick. Use a short-season corn hybrid to make sure that crop will mature. Or, if you can spare the land for the season, fallow it for a month or so following rye harvest, applying manure at a more leisurely pace than usually possible during spring and fall, then till and seed alfalfa-grass or another perennial forage crop in late July. If you manured the land well you shouldn't need starter fertilizer for the seeding. Another advantage winter rye has is that in the event of serious alfalfa winterkill you can harvest it during May as rye silage not anyone's favorite feed perhaps, but fine as an emergency crop.

Dry Beans

Carol MacNeil

CCE-Vegetable Program

Beans are maturing, with foliage and pods yellowing. A split set and some aborted pods can be seen due to the long stretches of hot weather we had earlier. Significant common bacterial blight (CBB) on leaves and pods has been observed. Leaves show irregular small to large brown, necrotic spots with bright yellow borders. Pods first show small water-soaked spots which enlarge, darken, and have a reddish brown border. The disease can grow through the pod onto the beans causing discolored spots. The best protection against CBB is to use seed that is certified, Western-grown and produced only with furrow irrigation. Only a trace amount of infection is needed to initiate disease the next year if saved seed is used and there are rain storms. Infected crop residues also winter over the disease, especially if thorough incorporation in the fall is not done. Rotation should be at least two years out of beans. The disease can be spread from infected to healthy fields by equipment: tillage equipment carrying infected crop residues from previous bean fields into new bean fields; planters with a small amount of saved seed being filled with certified seed; and, cultivators/sprayers going from infected to healthy fields, especially if foliage is wet...clean equipment before moving between fields.

Coppersprays can reduce the spread if they're begun when disease first appears, applied before rain, and if they can get down into the canopy.

2010 Dry Bean and Weed Desiccation (*Carol MacNeil, CCE, CVP, and Robin Bellinder, Cornell*) – In general, apply desiccants early enough to speed harvest, but after seed is physiologically mature. The split set in some fields will make the timing decision more difficult. Good coverage is always important. Remember that kill will be much quicker in warm, sunny weather than in the cooler days of October. Drift will kill or spot non-target plants. Defol 750 (sodium chlorate) – Seed should be physiologically mature. Scrape seed coat off seed. If it's green underneath it's not mature. Use 3.2 qts/acre, repeat if needed. Use a NIS or COC. Don't mix with insecticides or other organic materials. Rainfast in 24 hrs. Less bean regrowth than with Gramoxone. Gramoxone Inteon (paraquat) – Plants should be mature with 80% yellow pods and no more than 40% of leaves are green. Use 1.2 – 2 pts/acre, split if foliage is very dense (max 2 pts/year). Use a non-ionic surfactant (NIS), crop oil concentrate (COC), or methylated seed oil. Rainfast in 15 – 30 minutes. Controls/suppresses annual broadleaves and grasses, and burns back many perennials. Touchdown Total (glyphosate) - Apply around 14 days before harvest (21 days in October) because it works slow in comparison to Gramoxone. Important: Apply a max of 24 oz/acre at the hard dough stage (max 30% moisture) of the beans. Do not use on beans that will be saved for seed! Add AMS as an adjuvant. If there's heavy rainfall shortly after application re-treat. Provides nonselective, systemic broadspectrum weed kill/burndown, with no bean re-growth. Some bean importing countries have a lower residue tolerance for glyphosate than the US. Valor SX/51WG (flumioxazin) – One application of 3 oz/acre is allowed. Use a COC or methylated seed oil, PLUS spray grade ammonium sulfate (AMS) or liquid N. Rainfast in 1 hour. In Robin Bellinder's, Cornell, trials in 2005 flumioxazin outperformed paraquat. Valor can be mixed with glyphosate.



Cornell Maple Program Invites Your Participation In The 2010 Webinar Series

Stephen Childs

New York State Maple Specialist

The Cornell Maple Program is providing webinars on the first Thursday of the month from August through December from 7 to 8 pm. A webinar link is available at www.CornellMaple.com. The next webinar will take place on September 2nd, from 7 to 8 pm. The topic will be "Maple Production for the Beginner". This program will focus on the basics of making maple syrup including: tree ID, tapping, sap collection, processing sap, filtering and storing syrup, and other maple products. This program will be presented by the New York State Maple Specialist, Stephen Childs. On October 7th, the New York State Extension Forester, Peter Smallidge will be presenting on the topic "Sugarbush management and thinning". On November 4th, Director of the Uihlein Forest, Mike Farrell will be presenting on the topic "Leasing taps, buying and selling sap". If you missed the August 5th webinar titled "The latest in maple tubing research and tap hole sanitation" it can be viewed by going to the www.CornellMaple.com webpage, click on the maple webinars choice. Next select "Scheduled and saved past conferences" then click on view.

Participants need to have an internet web browser and a high-speed internet connection. If you do not have access to a high-speed internet connection the webinar will not work. Participation in each webinar is available on a first-come, first-served basis. If you are particularly interested in a webinar topic, please plan to connect at least 20 minutes prior to the start time. Before each webinar, participants will be asked to register into a database so we can monitor the value of the webinars and their geographic extent. No pre-registration is required.

The interactive nature of the webinar is the opportunity to ask questions of the presenter in a real time venue. No additional hardware is required. Virtually all current computers already have a Flash player installed, which is used by the web conferencing software. Access to the web site that hosts the internet seminars is free of charge. Your

standard Internet connection charges would still apply. We are not able to assist users with problems they may have with their computer, connections, or connection speed.

Dairy Market Watch

Milk Component Month	Milk Class Prices						Statistical Uniform Price & PPD				Albany \$/gal. to farmer
	Butterfat	Protein	I(Boston)	II	III	IV	Jamestown, NY		Albany, NY		
Jul09	\$1.24	\$1.70	\$13.51	\$10.87	\$9.97	\$10.15	\$10.84	\$0.87	\$11.44	\$1.47	\$0.99
Aug09	\$1.25	\$2.10	\$13.29	\$10.86	\$11.20	\$10.38	\$11.20	\$0.00	\$11.80	\$0.60	\$1.02
Sep09	\$1.22	\$2.42	\$14.18	\$11.01	\$12.11	\$11.15	\$11.78	(\$0.33)	\$12.38	\$0.27	\$1.07
Oct09	\$1.28	\$2.56	\$15.60	\$11.93	\$12.82	\$11.86	\$12.91	\$0.09	\$13.51	\$0.69	\$1.16
Nov09	\$1.47	\$2.70	\$16.11	\$13.24	\$14.08	\$13.25	\$13.87	(\$0.21)	\$14.47	\$0.39	\$1.25
Dec09	\$1.54	\$2.88	\$17.24	\$14.25	\$14.98	\$15.01	\$14.96	(\$0.02)	\$15.56	\$0.58	\$1.34
Jan10	\$1.44	\$2.79	\$18.28	\$15.22	\$14.50	\$13.85	\$15.11	\$0.61	\$15.71	\$1.21	\$1.35
Feb10	\$1.44	\$2.71	\$18.09	\$15.65	\$14.28	\$12.90	\$15.15	\$0.87	\$15.75	\$1.47	\$1.36
Mar10	\$1.54	\$2.13	\$17.59	\$14.46	\$12.78	\$12.92	\$14.39	\$1.61	\$14.99	\$2.21	\$1.29
Apr10	\$1.58	\$2.14	\$16.47	\$13.78	\$12.92	\$13.73	\$13.96	\$1.04	\$14.56	\$1.64	\$1.26
May10	\$1.71	\$2.15	\$17.05	\$14.90	\$13.38	\$15.29	\$14.76	\$1.38	\$15.36	\$1.98	\$1.32
June10	\$1.72	\$2.20	\$18.53	\$16.01	\$13.62	\$15.45	\$15.58	\$1.96	\$16.18	\$2.56	\$1.39
July10	\$1.90	\$2.05	\$18.91	\$17.10	\$13.74	\$15.75	\$16.28	\$2.54	\$16.88	\$3.14	\$1.46

July Utilization (Northeast): Class I = 40%; Class II = 23%; Class III = 27%; Class IV = 10%

[Class I = milk processed as beverage milk; Class II = manufactured products such as cream, yogurt and cottage cheese; Class III = manufactured products – cheese (American, Italian), evaporated and condensed products, Class IV = butter, nonfat and whole milk powder.]

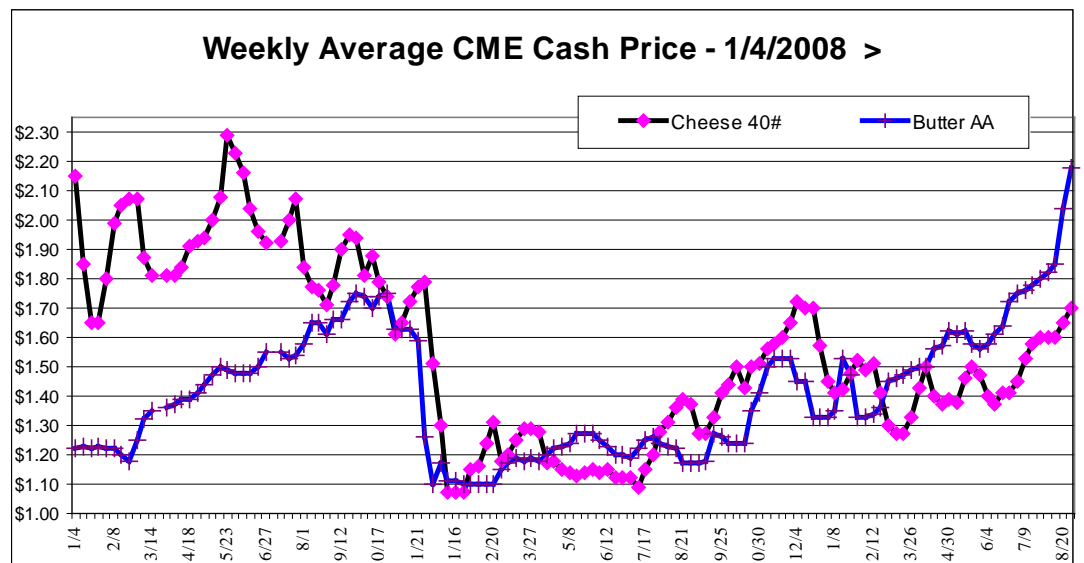
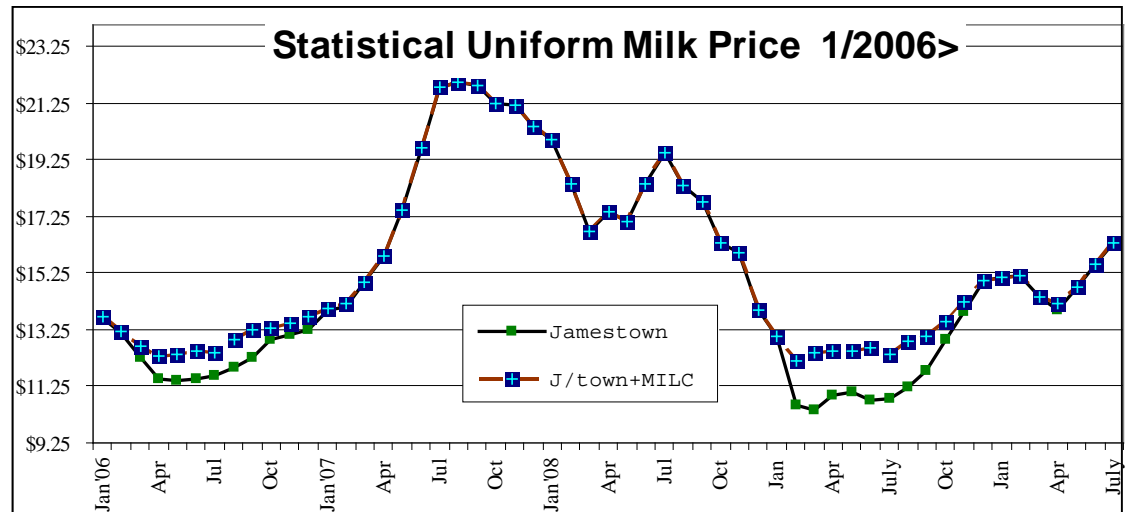
Dairy Commodity Markets (USDA Dairy Market News):

Butter

Friday CME cash prices: 7/23 \$1.80, 7/30 \$1.82, 8/6 \$1.85, 8/20 \$2.04, and 8/27 \$2.18. The CME Group daily cash butter price continues to be firm and has steadily increased over the past 9 consecutive trading sessions. Current churning is often not keeping pace with demand, thus suppliers are reaching into lighter than desired inventories to supplement shortages. Some butter producers are generating stocks for export between now and February 2011. CWT has awarded export assistance for nearly 33 million pounds of butter and/or anhydrous milk fat for export to 11 countries during the next 6 months. This export activity has some suppliers and handlers questioning what the domestic supply situation might be for the balance of the year.

Cheese

Friday CME cash prices (40# blocks): 7/23 \$1.60, 7/30 \$1.60, 8/6 \$1.60, 8/20 \$1.65, and 8/27 \$1.70.



Cash cheese prices at the CME Group continue to set new daily and weekly 2010 highs. Current cheese supplies have tightened through much of the country as milk needed to cover school needs requires larger volumes as additional schools reopen. In parts of the country, plant operators are unable to secure additional fluid supplies to help fill orders and have reduced production schedules. Cheese yields remain seasonally low.

Dry Products - The NDM market is mostly steady. Trade sentiment is uncertain whether prices may have hit a plateau. Drying schedules are mostly lighter with some operations increasing their schedule for high heat production. Inventories are generally in better balance, between reduced production and increased domestic and international sales.

Fluid Milk - Milk production in the 23 major states during July totaled 15.3 billion pounds, up 3.0 percent from July 2009. Production per cow in the 23 States averaged 1,830 pounds for July, 59 pounds above July 2009. The number of milk cows on farms in the 23 States was 8.37 million head, 26,000 head less than July 2009, but 19,000 head more than June 2010.

Milk receipts are mostly lower through most of the country east of the Rocky Mountains. Intakes were about steady in the West Coast states; Idaho, Utah, Arizona, and New Mexico. Additional schools have reopened, increasing the volume of milk needed by bottlers in Class I and further reducing manufacturing milk supplies. In some areas, finding a truck/trucker to haul a load is a problem. Very high cream prices continue to impact churning levels and cream buyer profitability.

Milk Income Loss Contract Payments - MILC payments for 2010: January, NO PAYMENT; February NO PAYMENT; March NO PAYMENT; April \$0.2115; May NO PAYMENT; June NO PAYMENT.

Comments:

Tight Cream Supply Improves Milk Price

Butter is made of gold for dairy farmers, with cash market butter prices rising almost 30 cents over last month. In fact, the butter price is the highest it has been since May 2004. Prices reflect lower butter production, tighter supplies (24% less than July 2009) and surging U.S. dairy exports. Even tighter supplies are expected, causing buyers to bid more aggressively for cream and butter for fear of scarcity in the near future. The strong butter price has helped to also improve the cheese market. Fluid milk production will once again ramp up as school begins again this fall, likely leading to even tighter markets. Butter prices at this level are likely short term in nature, however. Milk production has already responded in the West, where some of the nation's largest butter plants reside.

Exports are strong and have risen almost to 2008 levels for May and June. The U.S. dollar has strengthened compared to the euro, and is about the same as the Australian and New Zealand dollars. Global demand remains strong.

Feed Prices Increase

Corn prices have been increasing rapidly (\$4.36 for December 2010 contract). According to Jim Dunn, Penn State University, the price increase will hurt ethanol producers, because gasoline prices have not risen with corn. This year's crop is forecast to be a record crop (U.S. 2010 corn production is forecast at a record-high 13.4 billion bushels, up 2% from last year) but usage is estimated to be even larger so net inventories might be lower. Protein prices are well above earlier this spring since soybean meal is now up to \$43/ton. USDA's monthly Milk Cost of Production estimates for 23 states indicates July 2010 total operating costs were higher compared to June 2010, but less than July 2009. Nearly all the increases from June 2010 – and declines from June 2009 – are attributed to changes in feed costs.

Ag Loan Interest Rates Remain Flat (so far)

According to a survey of 198 ag bankers in the Midwest, as of July 1, 2010, ag loan interest rates were about the same as three months earlier. Averages (second quarter and first quarter, respectively) included: operating loans – 6.12%, 6.13%; and real estate – 5.99%, 6.04%.

Not Out of the Woods Yet!

Ranking	State	Million lbs.	% Change
1	California	3402	4.7%
2	Wisconsin	2267	2.2%
3	Idaho	1117	5.2%
4	New York	1100	2.1%
5	Pennsylvania	909	1.7%
6	Minnesota	794	1.4%
7	Texas	737	2.5%
8	Michigan	711	2.7%
9	New Mexico	679	3.2%
10	Washington	512	6.2%
11	Ohio	456	0.7%
12	Iowa	377	0.8%
13	Arizona	335	8.8%
14	Indiana	296	2.1%
15	Colorado	244	---
16	Vermont	211	-0.5%
17	Oregon	209	8.3%
18	Kansas	208	2.5%
19	Florida	173	3.6%
20	Illinois	159	-1.2%
21	Utah	157	2.6%
22	Virginia	144	-0.7%
23	Missouri	119	-7.8%

Still of concern is the cow herd inventory, which increased by 20,000 animals in July over June. We are now nearly back to the number of cows we had in 2009. According to the USDA NASS, January-July 2010 dairy cull cow slaughter totaled about 1.595 million head, down about 78,000 from the same period a year earlier. The strong markets seem able to absorb the extra milk now, but the milk price may not hold up if milk production continues at this rate. Market experts will be watching exports closely in the coming months.

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Dairy Herd Improvement Association Listing

Market Manager: Randy Perkins 607-227-6528 Area Technicians: Dave Prutsman

607-973-2586; Joe Summers 585-813-4273; Katie Thomas 814-848-9808

Producer	Rolling Milk	Rolling Fat	Fat %	Rolling Protein	Protein %
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Steuben County

DEUSENBERY FARMS	27401	1075	3.9	857	3.1
SMITH STOCK FARM	28429	941	3.3	829	2.9
STONE RISE FARM	26314	990	3.8	821	3.1
BEACH THOMAS JR.	24557	974	4.0	792	3.2
SMITH GERARD M.	23975	917	3.8	788	3.3
CLARK EDWARD JR.	23614	889	3.8	745	3.2
SCHUMACRES & ASSOCIATES	24601	920	3.7	742	3.0
ROGER DUNN	23695	882	3.7	731	3.1
ARCHER BRUCE	22259	865	3.9	709	3.2
DWI BET FARMS	23775	863	3.6	704	3.0
BENTON HOLSTEINS	23398	912	3.9	703	3.0
JA WA FARMS	21733	789	3.6	683	3.1
PRICE TOM	22354	822	3.7	681	3.0
KIMBLEDALE	21621	809	3.7	677	3.1
KARR DAIRY FARMS LLC	22257	785	3.5	670	3.0
BARBR FARMS	21545	768	3.6	665	3.1
BURNS FAMILY FARM LLC	21869	797	3.6	660	3.0
ELLISON FARMS	20626	764	3.7	636	3.1
FIDE FARMS	19391	751	3.9	615	3.2
WADE LYLE & JEAN	18841	656	3.5	599	3.2
EDWARD SOPOROWSKI	20120	762	3.8	590	2.9
ATHERTON FAMILY	18742	673	3.6	583	3.1
SCHENCK MARVIN & JANINE	19560	686	3.5	573	2.9
NICHOLS DAIRY	17680	730	4.1	568	3.2
KRAMER DAVID & KIMBERLY	18162	707	3.9	566	3.1
STEWART DAVID & KATHY	17812	683	3.8	551	3.1
WATERS CHARLES P.	16561	577	3.5	507	3.1
WHISPERING WINDS FARM	13767	489	3.6	400	2.9
FLANAGAN BROTHERS	10866	441	4.1	334	3.1

Producer	Rolling Milk	Rolling Fat	Fat %	Rolling Protein	Protein %
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Chemung County

LANTLAND FARMS LTD.	23804	949	4.0	745	3.1
BOOR DAVID	23210	863	3.7	739	3.2
BLAKEMORE LANCE&GINA	21688	803	3.7	672	3.1
TURNER DAVID	18869	656	3.5	578	3.1
GRACE FARMS	12334	553	4.5	429	3.5

Schuyler County

SENECA VALLEY FARM	27437	1056	3.8	858	3.1
GAIGE FARMS	26447	999	3.8	815	3.1
BERGEN FARMS	25935	993	3.8	789	3.0
BURR CHARLES AND KEN	23628	950	4.0	758	3.2
GLENVIEW DAIRY LLC	25443	960	3.8	757	3.0
HOSTETLER MARK & MARYEL	23985	860	3.6	721	3.0
BURR CHARLES AND KEN	19860	864	4.4	658	3.3
LONE OAK FARM	18350	662	3.6	540	2.9
ALLEN THOMAS R.	17245	662	3.8	533	3.1
NICK AND ERICA WOOD	13640	627	4.6	475	3.5
KARL CHRISTIAN	15469	617	4.0	473	3.1
HOFFMAN RONALD&CARMELLA	15313	579	3.8	449	2.9