In North Carolina there is an insufficient supply of high quality forages and corn grain is not a profitable crop for dairy producers (we import alfalfa and we buy most of our corn). Corn silage is the primary forage fed by most dairymen. Therefore, corn silage must provide energy and roughage value and must be of HIGH QUALITY. Quality forages must maintain a healthy rumen and digestive system, support high milk production without acidosis and need a minimum amount of supplementation.

Measurements of a QUALITY Corn Silage:

1. Palatable-supports high intake
2. Good fermentation—mainly lactic acid, low butyric and acetic acid, low ethanol; low yeast and molds
3. Adequate effective fiber (fiber level & chiplength)
4. Protein levels—7 to 8%
5. Energy—high fiber digestibility—moderate grain in corn silage

FIBER DIGESTIBILITY depends on:

1. Variety—Current varieties range in fiber digestibility of about 10 units
2. Fiber length and amount—Inadequate effective fiber results in low rumen pH which reduces digestibility, causes acidosis, laminitis, low fat test, and then lower production
3. Maturity—like any grass, fiber digestion declines with maturity
4. Fermentation—Poor fermentation reduces palatability, fiber digestibility and overall energy value.

Corn Silage Hybrid Selection:

Differences in hybrid types allow for greater differences from which to choose and to meet the needs of individual farms:

*fiber digestibility, yield, disease, insect & drought resistance, agronomic characteristics and grain content

The digestible fiber yield/acre measures silage tonnage yield/acre plus the amount of digestible fiber

Remember a good quality corn silage begins with the seed you put in the ground.

This information was taken from a presentation by Dr. Lon Whitlow, Extension Specialist, NCSU.
The Components of Producing High Quality Milk

Dr. Don Pritchard, Extension Specialist

As a dairy producer, what are the components of your milk quality program? Do you have a written protocol for producing high quality milk? What practices do you and the people who milk and handle the cows on your farm follow to insure that you are producing the highest quality milk possible?

Dr. Pamela Ruegg, an Extension Milk Quality Specialist at the University of Wisconsin, a few years ago wrote a very good paper on the 10 smart things she thought dairy farms should do to achieve the production of high quality milk (achieve milking excellence is what she called it). I have taken the liberty of adding my comments and suggestions to her list of 10 things to do to produce high quality milk. The list is presented below.

1. Set Performance Goals: Quality goals must be set so the performance and progress of the workers and quality measurements of the milk produced can be evaluated. Set goals for bulk tank milk SCC and SPC values. Striving to keep SCC scores always under 400,000 cells/ml should be an attainable goal. Once attained, keep lowering the value and strive for a herd SCC value of less than 250,000. Other goals to work towards are having Standard Plate Count values that average less than 10,000 cfu, a new subclinical infection rate of less than 5% per month, and over 85% of the cows in your herd with a DHIA linear SCC score of less than 5.

2. Identify Milk Quality Problems Quickly: Use practices that detect mastitis infection early. The use of cow-side SCC measurement devices can be helpful. Using the CMT on all fresh cows within the first few days after calving is recommended. Stripping a few streams of milk from each quarter before attaching the milking unit is very important. Monitoring the monthly bulk tank SCC values, as well as reviewing monthly individual cow SCC values can help detect problems early.

3. Milk Clean Cows: To reduce the time needed in the milking parlor to clean cows before milking, the cows should be as clean as possible when they get to the parlor. You should have properly sized and maintained free stalls. Use sand bedding if possible, and be sure an adequate amount of clean bedding is kept in the stalls at all times. Alleys should be scraped as often as needed to be kept reasonably clean. Use a predip to reduce the number of environmental bacteria on the teats at time of milking.

4. Standardize Your Milking Routines: Establish a written protocol of the milking preparation routine to use in your dairy, and then be sure everyone follows it at every milking. Your protocol should include forestrip, predip, dry, attach, and post dip. Consistent use of these components will help you produce better quality milk.

5. Train Your Staff: People who work in your dairy should have written protocols for the jobs they perform, they should receive training for the jobs they are expected to do, and they should receive periodic update or refresher training for those jobs.

6. Maintain and Update Your Milking System: Milking systems in small herds need to be serviced 1-2 times a year, and systems in large herds should be serviced more frequently (at least quarterly). Replace inflations and other components as recommended by the manufacturer. Adjustments to automatic take-off units should be made to conform to current standards for milk flow rate at time of removal and detacher delay time before removing the milking unit.

7. Have Written Treatment Protocols: Treatment protocols are used to define standard treatments for common diseases. Protocols are especially important when multiple people have responsibility for treating sick animals or when extra-label drug use is prescribed by your veterinarian. The protocols can be simple, but should be developed by you, your veterinarian, and your key employees who take care of the animals.

8. Have A Mastitis Biosecurity Plan: Have in place a plan for how to protect your cattle from contagious mastitis pathogens. Steps to include in your plan are to only buy healthy cattle, buy from a healthy herd, keep purchased cattle healthy (separate for a time after bringing onto your farm), and culture bulk tanks twice monthly after newly purchased cattle are brought into your herd to monitor for new pathogens.

9. Take Proper Care of You Dry Cows: Most new cases of mastitis occur during the dry period. Maintain clean, dry housing for dry cows, infuse a dry cow antibiotic into all quarters, use a teat sealant at time of dry off (either an internal or external product can help prevent new infections), use appropriate vaccines, and feed properly balanced rations.

10. Use Appropriate Consultants: While producers obtain information from a variety of sources, consultants can help determine what practices are appropriate for your herd and your management level. Form a consultant team for your farm that meets periodically to review your programs and the progress you are making at reaching your goals for producing high quality milk. I suggest you include on your team your Extension agent, veterinarian, milk handler field representative, and other qualified individuals who you currently consult with.
Outlook for 2006

Dr. Geoff Benson, Extension Specialist

The production outlook for 2006 depends on the balance between several factors that favor higher milk production and some which would discourage it. Factors favoring higher production include a continuation of relatively low feed costs, milk production per cow that has returned to long term trends, the momentum provided by higher cow numbers, and a January 1, 2006 dairy heifer inventory that was 3.9% above year ago levels. Offsetting factors include strong cull cow prices. Round 3 of the CWT voluntary supply management program and significantly higher energy costs.

USDA projects the US average farm price for corn at $1.90 per bushel (midpoint) for the crop marketing year which began October 1, down 16 cents from the previous year. The average 48% soybean meal price is pegged at $172.50 per ton (midpoint), down $10. However, for North Carolina dairy farmers, increased transportation costs will off-set part of these reductions in farm prices. Nevertheless, the milk-feed price ratio should remain somewhat favorable for milk production.

The current CWT herd reduction program will remove approximately 66,000 cows and an estimated 1.2 billion pounds of milk, 0.7% of the milk supply. CWT will also continue to subsidize cheese exports in an effort to support milk prices. To put this in perspective, USDA’s January 1, 2006 dairy cow inventory shows the number of dairy cows was 53,000 cows greater in December, 2005 than in December 2004.

Although the worst of the short-term effects of Hurricanes Katrina and Rita on energy prices are past, significantly higher energy costs are expected to persist through 2006. Crude oil futures prices are above $60 per barrel for the next two years. Higher energy costs have both a direct effect and an indirect effect on farm production costs because most farm inputs have an energy component, particularly nitrogen fertilizer. The US Department of Energy’s data show that diesel and natural gas prices have peaked but the forecast for the whole of 2006 is for most energy prices to remain above 2004 and early 2005 levels. Diesel prices, which overtook gasoline prices in 2005 will be about one-third higher than 2004, on average, and will remain at a premium to gasoline in 2006. Natural gas prices also increased sharply in the last half of 2005 (up 40%) and then declined to levels close to pre-hurricane levels. For all of 2006, prices are expected to be substantially higher than 2005, up 11% based on US Department of Energy forecasts. Natural gas is the feedstock for ammonia-based nitrogen fertilizers and 2006 crops are expected to be significantly more expensive to plant and harvest.

Higher energy prices will affect the health of the overall economy and consumer discretionary income and purchasing decisions. Butter sales likely will be under pressure as some consumers reduce the amount of food eaten in restaurants and buy cheaper substitutes for home consumption. The impact on sales of other dairy products is less certain but sales will likely grow more slowly than in 2005. Current stocks of cheese and butter are above year ago levels.

USDA latest forecast for 2006 is for milk production to increase by 2.6% to 181.5 billion lb. The midpoint forecast for the US All Milk price is $13.80 per 100 lb., which is $1.35 below 2005. The midpoint Class III forecast is $12.45, down $1.60 per 100 lb. The current Class III futures market presents a similar picture, with Class III prices down about $1.35 for the year. If North Carolina prices track national prices as they have in the past, NC dairymen should see prices that are about $1.35 lower than in 2005, with an average Federal Order 5 uniform (blend) price of around $14.90 per 100 lb, for 3.5% butterfat milk. Monthly prices are expected to be below the MILC payment trigger and payments averaging around $0.25 to $0.30 per 100 lb. can be expected if the current proposal to renew the program passes Congress.

These projections are based on “normal” weather and milk production next spring will be critical. An abnormally large spring flush would likely send milk prices lower for the rest of the year but a smaller than expected amount of spring production would have the opposite effect and could send prices higher. Similarly, if the consumer side of the equation is weaker than expected this will translate into weaker farm prices. Overall, 2006 is shaping up to generate farm prices that are fairly close to long term trends. During the 6-year period from 2000, when Federal Order 5 was created, through 2005, the average minimum blend price was $15.06 per 100 lb. However, these prices will seem quite poor relative to the strong milk prices that have existed since the fall of 2003 even if supplemented by MILC payments.

In light of this outlook, belt-tightening will be necessary and sound financial management practices and judgment will be important. This includes measuring and monitoring financial performance, including cost of production.
NEW MILC RULES AND SIGN UP RELEASED

The rules for signing up for the MILC program have been released. The initial sign up period is March 13, 2006 through April 14, 2006. A second sign up period begins April 15th. The basic difference is that you can sign up for any start date during the first period, including retroactive payments. If you miss the opportunity you can only sign up for a start month in advance and without knowing what the payment rate will be. Producers should contact the local FSA office.

Mailing List Reminder

Please be sure and let us know if you want to keep receiving the Dairy newsletter. Please either send this form below, call, or email and let us know. This is a free service provided by North Carolina Cooperative Extension and available to anyone that request this newsletter. We are mandated by NC State to update our mailing lists each year! You can call us at the Yadkin County Center @ 336-679-2061, mail this form back to us at the Yadkin County Center, NCCE, PO Box 97, Yadkinville, NC 27055, or email nancy_keit@ncsu.edu. Please don't forget!!!!!

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