



Louisianana

Dairy Digest

Your Herd Management Resource

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Dairy Market News

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October Advanced Class I Price Bounces Up 84 cents/cwt.

The upward trend in milk prices that usually occurs each fall will likely only be a bounce in 2004. Milk prices increased in October after three straight months of plummeting prices that saw Class I milk prices fall more than \$7.00 per hundredweight (cwt.) from the record high of \$24.23 recorded in June. Dairy markets continue to be somewhat confused due to the quick recovery in milk production and uncertainties related to dairy product demand. The demand-supply situation is beginning to become clearer as dairy traders react to increasing milk supplies and push prices down. The October Class III Advanced skim milk price was the Class I mover (based on the value of skim milk used in cheddar cheese production) because it was greater than the corresponding Class IV price (representing skim milk value in butter and milk powder products). The USDA reported the October 2004 Advanced Class III skim milk price at \$8.53 per cwt. compared to the Advanced Class IV skim milk price of \$6.44 per cwt. The difference between these respective Class III and Class IV prices (after factoring in butterfat prices) resulted in a \$2.02 per cwt. higher Class I base price (\$14.78 versus \$12.76). Thus, the USDA announced on September 17 that the October Advanced Class I "base" milk price would be \$14.78 per cwt. (for 3.5% butterfat milk). After adding the \$3.10 Class I price differential for the pricing zone which includes Atlanta, Ga. to this "base" price, the Advanced Class I milk price for October 2004 was \$17.88 per cwt. Producers in south Mississippi and southeast Louisiana can add another \$.30 per cwt. bringing their Class I price to \$18.18. Thus, the October Advanced Class I price is \$18.18 per cwt. and represents an increase of \$0.84 per cwt. (+4.8%) above the corresponding September price of \$17.34. Dairy producers need to remember that the Class I price will be an important, but not the only factor influencing revenues derived from the sale of milk produced during the month of October. Since about 50-70 percent of Louisiana and Mississippi milk is usually processed into Class I products, settlement checks received in mid-November as the final payment for milk produced and sold in October will reflect this Class I utilization. For the sixth consecutive month, the relatively high Class I milk price will result in no (\$0.00) Milk Income Loss Contract (MILC) payments for October.

Advanced Class I Milk Price @ 3.5% BF	Price per Cwt. in South MS and SE LA	Price Versus October 2004	% Price Versus October 2004
October 2004	\$18.18	—	—
September 2004	\$17.34	↑\$0.84	↑4.9%
August 2004	\$18.02	↑\$0.16	↑0.9%
October 2003	\$17.67	↑\$0.51	↑2.9%
October 2002	\$13.55	↑\$4.63	↑34.6%



A State Partner in the Cooperative Extension System

The LSU Agricultural Center is a statewide campus of the LSU System and provides equal opportunities in programs and employment. Louisiana State University and A. & M. College, Louisiana parish governing bodies, Southern University, and United States Department of Agriculture cooperating

Market Conditions

BOUNCING! A single word has been used in this newsletter during the past 6 months to describe general dairy market conditions and this month it is “bouncing” to illustrate the variability of dairy prices during recent weeks. It looks like the usual three to four month period of increasing milk prices witnessed during late summer and early fall will be a one-month bounce in 2004. Dairy processors and traders are bidding down milk prices in response to surging milk supplies as milk cow numbers and productivity per cow rebound across the country. Despite the onslaught of growing milk output, dairy product demand is recovering as product prices fall from the lofty levels seen this spring and fall. Processors are using these increasing raw milk supplies to rebuild their inventories of cheeses and butter that shrank this summer when milk prices were at all-time record highs. The USDA’s August 31 Cold Storage report shows that total inventories of butter fell 16% between July and August and were 36% less than August 2003. Commercial holdings of various types of natural cheeses on August 31 ranged between 2% and 7% less than July 31 totals and ranged between 2% fewer to 18% more than last July 31 inventories. However, government owned stocks of butter declined to only 35,000 pounds this August versus 9,567,000 last August while government cheese stocks were 20% less than August 2003. Now, processors are working hard to manufacture enough dairy products to fulfill the peak Thanksgiving and Christmas holiday demand. While the supply side of the dairy market has a general negative tone, there is some demand side strength that is continuing to perplex and confound dairy traders. This confusion is manifesting itself as substantial up and down swings in cheese and butter prices. For example since mid-September, it has been commonplace for cheese and butter prices to fall by more than 10% in one week only to see these prices bounce back the following week. The four hurricanes that hit Florida and the Southeast during September certainly added another factor of uncertainty that lead to bouncing milk prices. These weather events curtailed Florida milk output and simultaneously caused demand to decline as vacationers fled from the paths of these hurricanes. Florida suffered the brunt of these storms and estimates are that more than 500 dairy cows were killed which will decrease milk output and increase milk imports. As a result, Florida handlers imported 253 truckloads into the state during the second week of October, compared to importing 241 loads during the previous week while moving only 181 loads into the state during the same week of 2003. Clearly, the market tone is “unsettled” as both traders and processors react to a wide variety of ever changing market conditions. But, there is a definite downbeat and pessimistic outlook for milk prices when the November and December Class I prices are announced which will likely see prices fall \$2.00 to \$3.00 per cwt. Thus, November Class I milk prices are expected to decline 5-8% and be reported near \$16.25 per cwt. for the Atlanta/Starkville zone. Dairy farmers have been eyewitness to an extremely interesting 2004 with record high prices tempered with tremendous uncertainty and risk due to extreme price volatility.

Milk Production

For the third month in a row, milk production recorded an increase in output compared to the same month in the previous year. This clearly indicates a dramatic reversal in the trend of declining milk cow number in the national herd. Not only are there more cows, but these cows are also producing significantly more output per cow per day. Dairy cow culling rates continue to be 18-20% lower than last year’s rates. Milk output in the U.S. was 153 (1.1%) million pounds higher in September 2004 as compared to September 2003; despite the fact that there were 23,000 (-0.4%) fewer cows in the U.S. herd. Productivity per cow grew by 21 (+1.4%) pounds per cow per month. Major western milk producing states continue to increase the number of cows on their dairy farms. The USDA estimates that California added 42,000 cows, Idaho added 18,000 cows, and New Mexico added 12,000 cows. Quarterly and 9-month cumulative milk production statistics are listed in the table below for selected states and the nation. These data clearly show that Mississippi’s and Louisiana’s dairy industries are still in transition in that output declined by more than 5% in the July-September period and during the first three-quarters of 2004.

Comparing TimePeriods 2004 versus 2003	Sept. % Change in Production	3rd Quarter % Change in Production	1st 9-months % Change in Production
U.S. Total	↓1.1%	↓1.1%	↓0.1%
California	↑4.9%	↑4.1%	↑2.1%
Wisconsin	↓0.4%	↓1.2%	↓0.9%
Idaho	↑4.4%	↑4.1%	↑3.4%
New Mexico	↑1.7%	↑2.7%	↑3.0%
Indiana	↓5.3%	↓1.8%	↓0.6%
Florida	↑7.7%	↑8.1%	↑4.8%
Kentucky	↑0.9%	↑2.4%	↓3.1%
Virginia	↑3.1%	↑3.5%	↓2.7%
Texas	↑7.7%	↑10.1%	↑8.3%
Mississippi	Not Available	↓8.1%	↓10.4%
Louisiana	Not Available	↓5.5%	↓6.5%
Alabama	Not Available	↓1.9%	↓1.2%
11-State Southeast Region	Not Available	↑1.5%	↓2.3%

Take a Look at Fluid Merit Dollars (FM\$) as a Sire Selection Criteria

Gary M. Hay, Professor and Dairy Specialist
Department of Dairy Science, LSU AgCenter

Introduction

Choosing the 'right' sires to produce the most profitable daughters in an A.I. breeding program is always a challenge. That challenge can be even more daunting than ever with so much information available today on so many traits. The USDA Dairy Sire Summaries now include three selection indexes that can be very useful in simplifying sire selection. These are called Net Merit Dollars (NM\$), Cheese Merit Dollars (CM\$) and Fluid Merit Dollars (FM\$).

What is a selection index?

A selection index is a tool that combines sire summary information or Predicted Transmitting Ability (PTA) on several different traits into one measure. A selection index accounts for the economic value of each trait in the index and the genetic relationships among all traits in the index. The value of a selection index comes from the fact that it optimizes genetic improvement for each trait in the index according to its potential economic value to the farmer. Two well-known examples of dairy sire selection indexes are the Type-Production Index (TPI) from the Holstein breed and the Jersey Performance Index (JPI) from the Jersey breed. Both of these indexes place a great deal of emphasis on production traits as well as overall type conformation traits. Both are very useful if a portion of your animals are being sold as breeding animals. However, if your income is solely generated from the sale of milk, the USDA merit indexes may be more appropriate as sire selection criteria.

Why use a selection index?

When you 'select' a sire to breed to your cows, you don't just select his desirable characteristics, you select ALL his characteristics. Attempting to set *minimum* levels of performance for numerous traits can be difficult, time consuming and extremely limiting. For example, if you attempted to 'select' only sires that were above a certain minimum level for milk production, component production, type and calving ease, you might find very few bulls that meet all those criteria. An index can take into account all of these traits as well as other traits by weighting each trait based on its economic value relative to the others traits in the index. In short, a selection index can simplify the process by ranking sires on a single numeric value.

How do you use a selection index?

The first step is to identify your milk market; then choose the index that best matches that market. For example, JPI and TPI both focus on the value of milk used to manufacture cheese. The major difference among the USDA Merit\$ indexes is the value each index assigns to milk protein. Cheese Merit\$ places more emphasis on protein production than either NM\$ or FM\$. Fluid Merit\$ places more emphasis on milk production than on protein or fat yield. Producers in Louisiana and Mississippi are currently paid for their milk based solely on skim and fat content of the milk. Therefore, **FM\$** should be a more appropriate sire selection criteria in the southeast milk market than either NM\$ or CM\$.

What other traits are included in the FM\$ index?

Several production as well as type, longevity, health and reproductive traits are part of the FM\$ index. These include Milk, Fat and Protein yield as well as Productive Life (PL), Somatic Cell Score (SCS), Udder Composite (UDC), Feet & Leg Composite (FLC), Body Size Composite (BSC), Daughter Pregnancy Rate (DPR), Service Sire Calving Ease (SCE) and Daughter Calving Ease (DCE).

Production Traits

Production traits included in the FM\$ index are milk, fat and protein. The relative value of each production trait in the FM\$ index along with the relative value of each of the remaining traits in the index is given in Table 1.

Productive Life

Productive Life is measured as the number of months a cow is in production up to 7 years of age. For cows less than seven years old, DHI information can be used to predict how many months she will produce by the time she is seven years old. Only the first 10 months of each lactation contribute to months of productive life; and cows receive no additional credit for production past seven years of age. PL contributes economic value to the dairy by lowering replacement costs and increasing the percentage of mature milking cows in the herd.

Somatic Cell Score

Somatic Cell Score is an indirect measure of the levels of both clinical and subclinical mastitis. SCS is easily measured through the DHI electronic somatic cell count (SCC) program. Sire selection to reduce SCS adds economic value to the dairy by reducing the incidence and costs of mastitis in a dairy herd.

Composite Type Traits

Udder (UDC), Feet & Legs (FCS) and Body Size (BCS) Composite Scores all are combinations of linear type traits. Linear type traits can provide additional information about potential incomes and expenses. Instead of trying to use PTA's for all 17 linear type traits in a selection index, composite scores combine a subset of type traits based on the relative value of each trait.

Daughter Pregnancy Rate

Some bulls tend to consistently produce daughters that more readily conceive. Daughter Pregnancy Rate (DPR) is a measure of cow fertility inherited from the sire. There are several advantages of improved DPR: lower breeding costs, higher peak and total lactation milk production and more heifers born for replacements.

Calving Ease Traits

Every lactation begins with a birth and difficult births can lead to reduced production, delayed reproduction, early culling of the cow and even death of either the cow or the calf or both. Reducing the number of difficult births in a dairy herd can have both short-term and long-term impacts on income and expenses. Selection for calving ease traits will contribute to the economic value of a dairy herd by lowering the number of difficult births in the herd. Service Sire Calving Ease (SCE) is a direct measure of a bull's ability to sire calves that do not contribute to calving difficulty in the cows with which the bull is mated. Daughter Calving Ease (DCE) is a measure of a bull's ability to sire daughters that exhibit less calving difficulty. Selection is important for both of these traits to reduce the effects of difficult calving in a herd.

Table 1. Relative weights assigned to various components of Fluid Merit\$ from August 2003.

Trait	Relative Weight (%)
Milk	24.0
Fat	22.0
Protein	9.0
Productive Life	11.0
Somatic Cell Score	9.0
Udder Composite	7.0
Feet & Leg Composite	4.0
Body Size Composite	3.0
Daughter Pregnancy rate	7.0
Service Sire Calving Ease	2.0
Daughter Calving Ease	2.0

What level of Fluid Merit\$ should be used for sire selection?

Table 2. The August 2004 USDA Sire Summary figures for FM\$ for 607 active Holstein A.I. sires.

<i>Average FM\$</i>	<i>+369</i>
<i>70th Percentile (Top 30%)</i>	<i>+448</i>
<i>80th Percentile (Top 20%)</i>	<i>+475</i>

The best way to use Fluid Merit\$ as a sire selection criteria is to establish a minimum level for sires being considered for use in your herd. Setting a minimum selection criteria at the lower percentile (70th) will result in slightly lower genetic progress overall but will allow selection from a larger group of sires (182 vs 121). This may or may not also have the advantage of lowering semen costs. **Selecting sires in either the 70th or 80th percentile for Fluid Merit\$ will ensure genetic progress for all the traits in the index relative to our current understanding of the economic importance of each trait.**

Feeding Milk Replacer to Dairy Calves Once-a-day

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The care and feeding of young calves is a critical component of the success of any heifer rearing program. Daily feeding of milk or milk replacer is labor intensive and time consuming. In most feeding systems, calves are fed milk or milk replacer in 2 equal feedings daily. This can be a significant labor cost for many dairy producers, especially if labor resources are limited and money is tight. Feeding calves twice daily may also interfere with other farm jobs performed at the same time of day.

One way to increase labor efficiency in the calf rearing program is to feed calves once instead of twice daily. Numerous studies have shown that there are no significant effects of feeding liquid once vs. twice daily. Research conducted at the LSU AgCenter studied effects of feeding milk replacer once versus twice daily in Holstein and Jersey calves. Calves at the LSU Dairy Farm and the Hill Farm Research Station were fed milk replacer either once or twice daily. Results indicated no differences in growth or starter intake with once-a-day feeding in both Holstein and Jersey calves. Feeding calves milk replacer once daily also saved an average of 7 minutes per calf per day at the LSU Dairy.

The amount of milk fed once-a-day is simply the amount normally fed twice-a-day combined into one feeding. For example, many Holstein calves are fed 2 quarts of reconstituted milk replacer twice daily, with each feeding containing approximately 8 ounces of milk replacer powder. When fed once-a-day, the amount becomes 4 quarts of reconstituted milk replacer containing 16 ounces of powder. Calf researchers and feed manufacturers recommend feeding the entire amount of milk replacer powder at one feeding (16 ounces); but only using about 70 to 75% of the water used as compared to twice-a-day feeding. Many calves simply cannot consume the large volume of liquid at once. Reducing the amount of water will allow adequate consumption of the nutrients in the milk replacer powder. So, when feeding calves once a day, mix 3 quarts of water (rather than 4 quarts) to 16 ounces of milk powder. If whole milk is fed once-a-day, add 4 to 5 ounces of dry milk replacer or dry skim milk to each gallon of milk.

Careful management is critical when feeding calves milk replacer once a day. Once daily feeding may increase the incidence of scours due to high total solids intake at a single feeding or from excessive concentration of solids. This may actually increase the cost of raising heifers due to increased sickness and death loss. When feeding calves once-a-day, it is especially important to observe the calves several times a day. Research has shown calves remain healthier when they are observed frequently regardless of whether they are fed milk replacer once or twice daily. Calves should be monitored 3 to 4 times daily to check on their health and to ensure that plenty of clean water and calf starter are available. Observing calves 3 to 4 times a day still requires less time and less labor than feeding twice a day. Regardless of which system is used, frequent observation of calves during the day WILL reduce the incidence of sickness and death.

Feeding dairy calves milk replacer once a day is an excellent option to reduce time and labor costs on a dairy farm without sacrificing calf growth and/or health.

Reducing Stress in Calves at Weaning

Charles F. Hutchison, Professor and Dairy Specialist
Department of Dairy Science, LSU AgCenter

Many dairy producers say their calves seem to go into a growth slump and often have more health problems shortly after weaning. “Weaning slump” is a term often used to describe this condition. If calves are weaned at the proper time and are managed to minimize stress during the weaning process and for a couple of weeks after weaning, then weaning slump can be reduced or eliminated. Calves experiencing weaning slump often have reduced feed intake resulting in slower growth and development. Calves are also more susceptible to infections, especially respiratory infections, during this time. It may take several weeks or even a month or more to get over this slump. Calves are often weaned, moved from individual housing into pens of 10 to 20 calves per pen, fed a different grain mix that is often too low in nutrients to meet their nutrient requirements and exposed to many new pathogens; ALL ON THE SAME DAY. This amount of stress will set calves back for several weeks while they try to cope with all of these stressors.

Minimizing stress should be a key calf management strategy in order to reduce or eliminate weaning slump.

Here are some feeding management practices that should help calves transition through the weaning process:

- √ Calves can be weaned when they are eating at least 2.0 lb of a good quality calf starter for three consecutive days. At this point the digestive system particularly the rumen should be developed enough so that the calf can digest and absorb enough nutrients from the calf starter to maintain growth and development.
- √ Avoid feeding hay to calves prior to weaning unless you are weaning calves at 9 weeks of age or older. More information on this subject will be presented in a future article.
- √ If you are currently weaning calves according to age (usually 6 to 8 weeks of age), please pay close attention to the intake of calf starter. Rumen development and the ability of a calf to digest dry feed is not totally a function of age. The development of a functioning rumen begins when a calf starts consuming dry feed (calf starter). Most calves will begin consuming enough starter to affect rumen development at 1 to 2 weeks of age. However, calves that have been sick or weak may not start consuming enough starter for several weeks.
- √ Make sure the calf has plenty of fresh, clean water available at all times. As calf starter intake increases, calves will consume more water.
- √ According to research conducted at the University of Tennessee, very little difference was seen in growth and development between abrupt weaning and reducing the amount of liquid feed by 50% for the last week prior to weaning. According to other researchers, however, gradual weaning may be less stressful on the calf. Abrupt weaning maybe more stressful on the owner, particularly if the calf hutches are located close to the owner's house. Calves tend to make a lot of noise for a few days after milk is taken away.
- √ Additives can be added to the calf starter to enhance rumen fermentation and increase intake. Sodium bicarbonate can be added to help stabilize rumen pH and yeast culture can reduce the amount of lactate in the rumen. Ionophores such as Bovatec and Rumensin tend to reduce the butyrate production and increase the propionate production in the rumen which helps rumen development. Products such as Bovatec, Rumensin and Deccox also help prevent coccidiosis. Calf starters also contain antibiotics such as chlorotetracycline to help reduce the risk of respiratory infections.

Here are some additional management techniques to help reduce stress when moving calves from individual to group housing:

- √ Do not move calves at the same time they are weaned. Allow a minimum of 10 days to two weeks for the calf to adjust to the stress of weaning before the stress of moving to a new environment. This would be a good time to start making the transition from the calfer starter to the calf grower grain mix.
- √ Deworm calves prior to moving them to group housing. Consult with your veterinarian to determine if the calf should receive any vaccinations prior to moving them to group housing. Continue to provide a coccidiostat in the calf grower fed to calves after weaning.
- √ Make sure the calf grower has the necessary energy and protein along with vitamins and minerals to support the growth parameters necessary for the replacement heifer program. Calves should be offered high quality grass hay that is fine-stemmed, highly palatable and free of mold.
- √ If you can avoid it, calves should not be weaned or moved during times of weather extremes or abrupt changes in weather. Weather is a tremendous stressor to calves.
- √ Try to put no more than 5 to 10 newly weaned and transitioned calves in a group pen. Avoid putting newly weaned and transitioned calves into a group pen containing calves that are a couple of months older.

Weaning slump can be reduced or eliminated if calves are managed to reduce the number of stressors that can occur at weaning or shortly thereafter. **Minimizing stress during weaning and transitioning calves prior to moving them into a group setting can result in healthy, more vigorous and faster growing calves for your replacement program.**

Should Pre-Weaned Calves Receive Hay to Develop the Rumen?

Charles F. Hutchison, Professor & Dairy Specialist

Department of Dairy Science, LSU AgCenter

Dairy producers often observe pre-weaned calves nibbling at the straw or hay bedding in the calf pen. It's natural to assume that calves need hay to help develop their digestive systems, particularly the rumen, since hay (forage) makes up a large part of the ration of an adult cow. However, feeding hay to pre-weaned calves actually delays rumen development and growth of the calf.

Calves are offered hay to help promote rumen development. The thought behind this was the rumen needed the "scratch factor" to help jump start the working of the rumen. The scratch factor concept is a myth for starting rumen function. In reality, rumen development and function is caused more by a chemical stimulant (volatile fatty acids or VFAs) in the rumen rather than a physical stimulant. The VFAs that help promote rumen function and development are primarily propionate and butyrate. These VFAs are derived more from grains than hay. Keep in mind, however, hay is important to the growth and development of the muscular layer of the rumen and to help maintain the health of the epithelium. The rumen papillae can grow too long in response to high levels of VFA. When this happens the papillae tend to clump together, thus reducing the surface area on the papillae for absorption of nutrients. There is also a need for the scratch factor coming from forage (hay) to prevent the papillae from forming layers of keratin which will also reduce the surface area for absorption. Therefore, hay should be included in the diet but in most cases after the calves are weaned. If calves are weaned at 5 to 6 weeks of age, then hay can be introduced at about 6 to 7 weeks of age. If calves are not weaned until 8 to 10 weeks of age or longer, then you could feed a limited amount of hay (0.5 – 1.0 lb/day) starting at about 6 to 7 weeks of age.

Another reason not to feed hay prior to weaning is the need for a highly energy dense ration. The voluntary intake of calves at this age is limited, but they still have a high energy requirement. The level of energy in the hay would be much lower compared to the energy level in the calf starter. If the calf consumes a lot of hay, then their intake of the calf starter would be reduced. This would result in less energy consumed in the total diet and would lead to a slower growth rate of the calf. The only way to meet the energy needs of a pre-weaned calf is by feeding high quality milk replacer or waste milk plus calf starter. Even the inclusion of premium quality alfalfa hay to the diet would usually not yield enough energy to support an adequate level of growth of pre-weaned calves.

Once calves are weaned they must derive all of their nutrient needs from the grain mix and forage in order to continue to grow and develop. To accomplish this they must have a properly developed and functioning rumen. Offering hay to pre-weaned dairy calves usually does not enhance rumen development. However, feeding high quality hay to a weaned calf beginning at about 6 to 7 weeks of age becomes critical to the development of a properly functioning rumen and to the overall health and growth of the calf.

Website of the Month

The State of Louisiana maintains a portal type website that contains a wealth of information and online services available to Louisiana citizens. The site has information on a wide range of topics such as jobs and employment with the state, maps, announcements and notifications, calendar of state events, a state government directory, a list of state agencies along with contact information, state publications, information on absentee voting, starting a business in Louisiana, tourist information, census data by region, birth certificates and vital records, unclaimed property, public auctions of state surplus property and many others.

Several state agencies now offer online access for basic state services such as driver's license and vehicle registration renewals, hunting and fishing licenses, applying for state jobs, filing state taxes, etc. Many of these can be done online without having to go to a state office. The website, <http://www.louisiana.gov/wps/portal/>, is a convenient, powerful tool for managing tasks associated with basic state services and acquiring information about a variety of issues associated with state and local government.

Undergraduate Programs in Dairy Science

Bruce F. Jenny, Head

Department of Dairy Science, LSU AgCenter

The Department of Dairy Science, in cooperation with the Department of Animal Sciences, offers a curriculum in animal, dairy, and poultry sciences. During the first two years of study students take basic courses along with introductory courses in their chosen discipline. Students follow a selected area of concentration during their junior and senior years. Students can select from various approved and free electives to support their area of concentration. Students interested in having an approved minor can take suggested courses for the minor as part of their approved and free electives.

The Department of Dairy Science offers areas of concentration in Dairy Production Science, Dairy Foods Technology, Pre-Veterinary Medicine, and Science and Technology. **Dairy Production Science** deals with all aspects of milk production, including dairy cattle nutrition, genetics, reproductive physiology, herd health and farm management. **Dairy Foods Technology** includes dairy product formulation and processing, quality assurance, marketing, and distribution of the final product to the consumer. Both concentrations offer a solid educational background by requiring applied courses in the major and general education requirements which include courses in chemistry, biological sciences, mathematics, communication skills, social sciences, and humanities.

Through selection of approved and free electives the concentrations in dairy production science and dairy foods technology have the flexibility that allows students to gain a strong knowledge of dairy science while developing skills in related areas. Many student select courses related to animal biotechnology, food processing, communications or agricultural business.

Students interested in Veterinary Medicine can complete the required courses for admission to the LSU School of Veterinary Medicine as part of the requirement in the **Pre-Veterinary Medicine** concentration. This concentration allows students admitted into the School of Veterinary Medicine after three years (102 hours) in dairy science to receive a Bachelor of Science Degree following completion of the first year in the School of Veterinary Medicine.

Students interested in the **Science and Technology** area of concentration can be assigned to the Department of Dairy Science for academic advising. For more information about our undergraduate programs or dairy science scholarships, please contact Dr. Bruce F. Jenny or Dr. Cathleen Williams, Department of Dairy Science, (225) 578-4411.

Dairy Foods Student Receives National Scholarship

Bruce F. Jenny, Head

Department of Dairy Science, LSU AgCenter

Melissa Brown, from Jennings, La. is the recipient of a **National Dairy Promotion and Research Board** (NDPRB) scholarship. The NDPRB can award up to 19 - \$1,500 scholarships annually to undergraduate students enrolled in college programs that emphasize dairy science. Melissa is a junior in the Department of Dairy Science with a concentration in dairy foods technology. She is a former 4-H'er in the 4-H dairy project, an excellent student and an active member and leader in various organizations. Melissa has been an active member of the Dairy Science Club and was a club delegate at the National American Dairy Science Association-Student Affiliate Division meetings in St. Louis in July 2004. She is also a member of the Intercollegiate Dairy Products Evaluation Team and the LSU College of Agriculture Les Voyageurs Student Speaker's Bureau. Melissa would like to attend graduate school at LSU after receiving her B.S. degree and would ultimately like to represent the dairy industry in Washington, D.C. Melissa is the third dairy science student at LSU to receive a NDPRB scholarship in the past four years. Funds to support these scholarships come from the national dairy check off program.

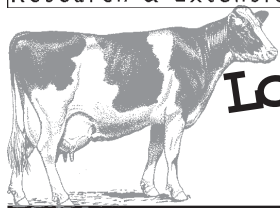
TOPHERDS BY AVERAGE TEST DAY ENERGY CORRECTED MILK (ALL COWS)

NAME	DATE	BR	COWS	DIM	ECM	MILK	FAT%	PRO%	RHA
KIRBY VARNADO	9/23	H	96	184	60.4	59.4	3.7	3.0	20673
LSU DAIRY	9/23	H	76	208	55.2	54.5	3.7	3.1	19805
SE LA EXP STATION	9/14	H	218	223	47.9	46.2	3.8	3.1	22285
J W DOC SCHILLING	9/2	H	125	206	44.7	44.3	3.7	2.9	17590
HOLLIS BANKSTON & SONS	9/29	H	91	174	43.2	41.3	4.0	3.0	16230
KARIE AND BRAD BLADES	9/8	H	184	313	43.0	44.9	3.3	3.1	17908
MARVIN FLETCHER	9/8	H	180	207	42.6	44.8	3.4	2.8	20163
FARMER'S DAIRY	9/8	H	43	254	41.7	43.3	3.4	2.8	18954
UDDER FRESH	9/9	H	104	240	41.6	40.2	3.7	3.4	18200
RUSSELL AND RUSTY CREEL	9/9	H	30	181	40.7	43.1	3.3	2.9	15377
O B MITCHELL	8/31	X	53	197	40.5	39.9	3.6	3.2	16714
LADD BLADES	9/22	H	188	203	40.5	41.4	3.4	3.1	18440
GALEN NIGHTINGALE	9/14	H	74	223	40.2	42.9	3.2	3.0	20035
BOBBY GOINGS	9/3	H	108	219	40.0	41.3	3.3	3.1	17280
SCHILLING BROTHERS DAIRY	9/8	X	35	205	39.1	38.9	3.6	3.1	16124
CIRCLE G FARMS	9/15	H	157	247	38.1	38.7	3.5	3.0	18407
LOUISIANA TECH DAIRY	9/6	H	48	173	37.8	39.4	3.4	2.9	19663
RAYMOND SCHMIDT	9/9	H	83	236	37.8	38.3	3.7	2.8	16890
RUSSELL AND RUSTY CREEL	9/9	H	78	208	37.6	39.6	3.3	2.9	16926
J PAUL ALFORD	9/6	H	107	248	37.5	37.1	3.8	2.9	21056
CLINTON STEVENS	9/8	H	116	262	36.6	35.7	3.8	3.2	16293
HILL FARM RESEARCH STATION	9/20	J	70	140	36.5	39.3	2.8	3.5	16672
KIRBY VARNADO	9/23	J	71	222	36.5	32.9	4.2	3.5	15026
JOHN FAUNCE JR DAIRY	9/7	H	235	183	36.3	37.9	3.3	3.0	18639
BILLY ANDREWS	9/23	H	101	204	36.1	33.8	4.0	3.3	18214

TOPHERDS BY AVERAGE TEST DAY ENERGY CORRECTED MILK (ALL COWS)

NAME	DATE	BR	COWS	DIM	ECM	MILK	FAT%	PRO%	RHA
LSU DAIRY	10/20	H	73	226	52.3	50.4	3.9	3.1	19999
SE LA EXP STATION	10/20	H	220	199	49.9	48.0	3.9	3.1	22157
KARIE AND BRAD BLADES	10/20	H	182	299	49.7	47.2	3.8	3.4	18040
LOUISIANA TECH DAIRY	10/4	H	47	129	49.6	52.2	3.3	2.8	19643
MARVIN FLETCHER	10/12	H	176	201	48.3	50.4	3.4	2.9	20111
O B MITCHELL	9/30	X	49	200	47.8	45.2	3.9	3.3	16708
FARMER'S DAIRY	10/6	H	44	219	47.3	47.9	3.6	2.9	19062
RUSSELL AND RUSTY CREEL	10/19	H	74	214	44.0	45.7	3.3	3.1	17145
LADD BLADES	10/19	H	197	175	43.9	44.3	3.5	3.1	18455
ROBERT POTTS	10/19	H	160	210	42.7	40.9	3.9	3.1	16462
BOBBY GOINGS	10/4	H	115	195	42.7	40.7	4.0	3.1	17250
C JOHNSON & W LITWILLER	10/21	H	106	184	42.7	46.3	3.1	2.9	21497
LEESFIELD DAIRY FARM	10/12	H	83	198	42.2	41.7	3.6	3.2	16358
RUSSELL AND RUSTY CREEL	10/19	H	30	167	41.8	46.2	2.8	3.1	15566
CLIFFORD CHAMPLIN	10/27	H	194	164	41.6	39.0	4.1	3.1	20039
UDDER FRESH	10/11	H	101	228	41.6	40.7	3.6	3.4	18299
RAYMOND SCHMIDT	10/11	H	79	204	41.2	41.0	3.7	3.0	17005
FRANCIS HOLMES	10/27	H	63	153	41.1	42.8	3.5	2.8	16174
HOLLIS BANKSTON & SONS	10/26	H	90	155	40.8	41.1	3.6	2.9	16273
CIRCLE G FARMS	10/7	H	171	212	40.6	41.0	3.5	3.1	18535
TO-BEV FARMS	10/12	H	167	159	40.1	40.4	3.6	2.9	17640
FORTENBERRY & FORTENBERRY	10/13	H	123	170	39.7	39.3	3.7	3.0	15219
J PAUL ALFORD	10/4	H	105	218	39.3	39.0	3.7	3.0	21262
LOUISIANA TECH DAIRY	10/4	J	39	118	38.8	36.0	4.1	3.3	14778
J W DOC SCHILLING	10/5	H	118	219	38.3	36.6	4.0	3.0	17762

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Dairy Digest

Your Herd Management Resource

Contact your county agent
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