



Massachusetts
Agriculture in the Classroom

249 Lakeside Avenue
Marlborough, MA 01752
508-443-1703
massaginclassroom@gmail.com

June 2016 Newsletter: A Focus on Dairy Education

Drink More Milk...Support Your Local Dairy Farmer!!: The Economics of Dairy Farming By Marjorie Cooper

Dairy farms, both large and small, have been a part of the agricultural landscape of our New England rocky hillsides of New England provide open areas where herds of cows graze on land not well suited to other forms of agriculture. Nearby fields are planted with crops that are used to feed cows during the winter months, thus preserving even more agricultural land and providing more open spaces in local towns. Farmers tend to be independent people, aware that their choices influence the success of their farms and the lifestyle of their families. Dairy farmers have a passion for their work, their herd, preserving the land for agriculture, and providing fresh, nutritious milk for consumers. Some New England farms continue to process their milk on-site, but these are now in the

minority due to regulatory and financial challenges. Most dairy farmers sell their milk to wholesalers to be processed in combination with milk from other farms. Milk is a commodity. The Federal government controls the marketing of milk by creating Federal Milk Marketing Orders (FMMO) which dictate the price for milk the farmer sells. The FMMO assures dairy farmers a minimum price for their milk. A dairy processor purchases fresh milk from a dairy farmer. The FMMO throughout the United States is charged with keeping a constant supply of inexpensive milk available to everyone while providing a fair price to all dairy farmers. Consequently consumers will have milk available at super markets, convenience stores, on milk routes and sometimes at

dairy farms at a reasonable price every day. The FMMO (www.fmmone.com) collects figures from farmers and processors, analyzes statistics, and creates a Statistical Uniform Price (SUP) each month. FMMO #1 encompasses all of VT, NH, MA, CT, RI, NJ and DE, most of MD, the southeast corner of PA and the eastern 2/3 of NY. The SUP is the minimum price which processors must pay to the farmer. Calculation of milk prices begins with milk containing 3.5% butterfat, 2.99% protein and 5.69% other solids. Transportation from farm to processing plant, some advertising and other deductions are subtracted from the price which the farmer is paid.

(Continued on next page)



MAC wishes to thank the Massachusetts Dairy Promotion Board for their support!
www.massdairy.com

Don't forget to sign-up for MAC's 'A Day of Dairy' Summer Workshop!
Great Brook Farm Park, Carlisle, MA, on
Monday July 11, 9:00AM -3:00 PM \$50.00 fee includes lunch.
See the cows who can milk themselves! Dairy farming in New England involves long days and few vacations. What makes dairy farmers continue to farm their land? Meet the farmer at the Great Brook Farm Park in Carlisle, MA.
Visit www.aginclassroom.org for more info and to sign-up.

The volume of milk sold in a marketing area and the volume in each Class of the commodity are compiled to formulate the SUP for the next month. Milk products are classed and priced accordingly to determine each month's SUP. The combination of the Class prices with consideration to the percentage of utilization becomes the SUP.

Class 1 is beverage milk. With a 3 week shelf life 33 % was sold at \$18.81/cwt.

Class 2 includes cream, ice cream, yogurt and cottage cheese utilized 25 % at \$13.57/cwt.

Class 3 includes hard cheese (American, Italian and Swiss) and cream cheese utilized 23.7 % and sold at \$13.74/cwt.

Class 4, which has the longest shelf life, includes butter, nonfat dried milk and other dried products utilized 18.3 % and sold at \$12.74.

The March, 2016, SUP was \$14.81. During March, milk production in Federal Order #1 was 2,305,022,343 pounds. Milk is priced per hundred pounds. "A pint's a pound the world around."

Consumers want food at "cheap" prices and often make their dairy purchases based on price. The fixed price paid to dairy farmers is not the price that consumers see at the point of purchase. Often, wholesale prices do not reflect the gap between the true cost of milk production and the amount farmers are paid. Some months the cost of running the dairy farm is greater than the amount of the milk check received from the processor.

In terms of economics, a dairy farmer has many challenges. There are costs for labor, feed, veterinary bills, repairs, and supplies on every farm. Each cow must be fed, safely housed, and kept healthy whether or not she is producing milk. A cow is ready to give milk when she gives birth to her first calf. A farmer needs to raise the animal for 2 to 3 years before she commences to give milk. Fresh milk has a shelf life of 2 to 3 weeks and milk must be sold before the refrigerated tank in which it is stored on the farm overflows. A herd of cows is milked 2 or 3 times per day. Even with advances in automated milking, it takes labor to milk the cows and keep them healthy.

Most Massachusetts farmers purchase grain from the Midwest. The cost of the grain depends on the success or failure of grain crops around the world. Grain prices depend on supply and demand.

Growing enough good quality grass and corn to store in silos or as dry hay to feed cows in cold weather is essential. Maintaining a plentiful and good tasting water supply is necessary. Barns that will keep out cold breezes in winter and locate fresh air in summer provide comfortable surroundings for animals. Cows are healthier and give more milk when they are comfortable.

Maintaining outdoor machinery that is drawn by tractors requires diligence. Grass must be cut, hay must be baled, corn must be planted and crops must be harvested for winter feeding. Cows in a pasture are a lovely site but fences must be maintained. When basic work is done on the dairy farm, time is spent investigating new grass or corn seed, considering different machinery, deciding the type of new building that would be best, or choosing an option to rent land for more space. All choices are dictated by finances. Dairy farmers have a passion for their work and they feel that providing a steady supply of milk is important. The variables requiring decisions can be overwhelming. State and local governments offer programs that are of assistance but these are not limitless.

Modern day dairy farmers need to consider additional ways to bring in income. Often a member of the family will work off the farm for extra income and for the benefits that the job provides. Gathering maple sap and creating a syrup business at what can be a slow time of the year can be an option. Logs cut from woods that surround fields and pasture can command a good price. Sweet corn can always be sold to consumers. Corn mazes are also popular and AgriTourism is a great addition if you are a farmer who enjoys the public and wants to have consumers visiting the farm and taking part in activities.

How can you keep local dairy farms thriving? Drink more milk! Buy more dairy products! Your consumption of this delicious group of food products directly affects the Statistical Unit Price each month. Support your local dairy farmers to assure that they will be able to continue to farm their land and provide us with the freshest, local milk for our families.

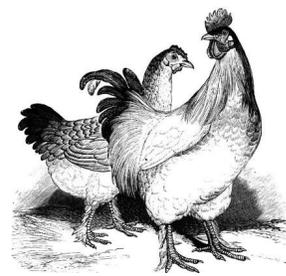
Sources:

Cooper's Hilltop Dairy, Rochdale, MA
Federal Milk Market Northeast Order
Edible Pioneer Valley, Farmers Market Math, "Milk Matters" by



MAC is extremely grateful to the Massachusetts State Grange Roots Initiative for their support of our programs!

www.massgrange.org



MAC's new guide to raising chickens in your classroom is out! Visit www.aginclassroom.org to download it today!

While June has been seen as a focus Dairy Month to enjoy milk, ice cream and lots of good dairy products, the importance of the value of milk and what dairy farms contribute doesn't diminish over the year.

While you're at it, take the opportunity to explore a dairy farm in your area!

Visit:

www.massnrc.org/farmlocator

to search for dairy farms throughout the Baystate!

Dairy Word Search

O F U F E K P T I X Z S T J X
 L X S L I M G U E R N S E Y B
 Q H E A L T H Y M J E R S E Y
 V R Q N X Z C N D J K M K M I
 H E I F E R I T D L B Q N N C
 G C N G N E G F A R M E R I E
 H A U R T B Y X I Q V F X C C
 A L T O Z C O N R R U D D E R
 E F R B I A A N Y R B J R E E
 Q P I A X R S L E K X J T E A
 V I T A M I N D C I C T Y C M
 L R I O U T K V A I U F J I J
 A H O L S T E I N B U Z W I X
 P H U E Z T Z M I L K M W A J
 N O S S A C U C H E E S E Z T

MILK
 BONE
 DAIRY
 ICECREAM
 HEALTHY
 CHEESE
 VITAMIND
 CALCIUM
 NUTRITIOUS
 HEIFER
 CALF
 HOLSTEIN
 JERSEY
 GUERNSEY
 PROTEIN
 UDDER
 BUTTER
 FARMER

MAC Dairy Grants

Massachusetts Agriculture in the Classroom encourages educators to include lessons/experiences about dairy as an important part of agriculture in our state.

This Dairy Grant, offered by MAC in partnership with the Massachusetts Dairy Promotion Board, is an effort to help educators in this process. Each grant is worth \$250.

www.aginclassroom.org

Click on 'Our Programs' and 'Dairy Grants' to apply today!



Milk and Good Health

Milk is an important component of school meals. Like other meal requirements, milk provides essential nutrients needed for healthy development of children of all ages. Milk fortified with vitamin D provides a perfect combination of nutrients like calcium, potassium, and protein needed for making and keeping bones and teeth hard and strong.

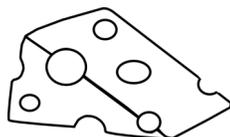
Other foods made from milk such as yogurt and cheese provide calcium, protein and potassium but not vitamin D and may have fat and/or sugar. Milk products offered in school meals are low-fat or fat-free forms as well as flavored low-fat milk. Because of its importance to the health and bone development of students, many schools have been developing strategies to encourage students to include milk in their meal choices.

For more information about Dairy foods, visit:

<http://www.choosemyplate.gov/dairy>

Involve students in comparing dairy products by reading the Nutrition Facts panel. Have them rank food packages according to the facts for calories and the different nutrients such as protein, calcium, potassium and vitamin D.

Make graphs showing the amount and/or percent of these nutrients in each food, and discuss conclusions students may draw from this information!



To download the full *Who Made My Milk* lesson and more lessons related to Dairy Education, visit:

<http://www.aginclassroom.org/#!lessons/c1959>



WHO MADE MY MILK LESSON

Grade Level: Grades 1 - 4

Lesson/Activity Description

In this lesson, students will learn about dairy cows. They will learn about the different types, the stomach of a cow, and the products that are produced from elements of the cow.

Guiding Question

What do we know and what can we learn about cows? Why can ruminant animals eat only green leafy plant materials and live healthy lives as opposed to humans that cannot?

Big Idea

There are many different breeds of dairy cows, each with different characteristics. Having 4 chambers in the stomach allows for a different digestive system from humans. This allows the cow to survive on only plant matter. Cows help to produce many different products.

Learning Objectives

- To understand the importance of the cows stomach to milk production, the different breeds of dairy cow, and the products that come from cows.

Materials

- White paper
- Construction paper
- Markers/colored pencils

Preparation

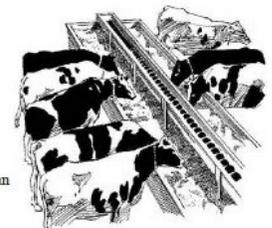
Review Background material above

Introducing the Lesson

Show the students the pictures of the different breeds of dairy cows. Explain that you will be learning more about dairy cows and how milk is produced.

Activate prior knowledge

Ask students what they know about cows. Have them draw a picture of a cow and share what they know about cows.



* Dairy Lesson supported by a grant from the Massachusetts Dairy Promotion Board.

A Message from MAC President Bobbie Oles

New program growth has been one of the goals of Massachusetts Agriculture in the Classroom this past year. As we continue to adjust to our new management, we constantly evaluate our actions as they relate to our mission “to promote agricultural literacy among educators and to provide them with the skills and support to integrate agriculture into the classroom. “

How can we improve our support of educators in gaining agricultural knowledge? Do we seek a special niche for our organization or keep our focus broadly on agriculture in general? What form should our lessons take? How can we stay at the forefront of agricultural education? These are questions we ask ourselves as we self-evaluate, restructure, and rework our goals. We invite your comments and ideas about improving our organization.

New committees are in the formative stages to help with this effort. An Education Committee will review lessons, make recommendations and help the Board of Directors maintain a collection of exemplary lessons on our website. This committee will help produce workshops that are timely and worthwhile for our teaching colleagues. The Financial Review committee will periodically oversee financial matters and the annual filing of appropriate forms. The Marketing, Media, and Outreach Committee will develop ways to promote MAC’s vision and publicize that vision to assist educators in fostering students’ understanding and curiosity about the relationships between agriculture and food systems. They will evaluate which types of media best reach our target audience. The Mini Grant Committee reviews all grant requests and determines the realistic capabilities of each one, making suggestions for improvements, when necessary, to help teachers have successful, sustainable grant projects.

This year has also reflected our successful partnership with the Massachusetts State Grange Roots Initiative and UMass Amherst. Representatives from all three organizations have worked together on a successful series of adult education presentations held at Grange Halls across the state. The Massachusetts State Grange and Massachusetts Agriculture in the Classroom, together, have administered Mini Grants and offered a winter conference on Agriculture and School Gardening. We look forward to more collaborations in the near future as we plan workshops and conferences.

It has become clear to the Board of Directors that we cannot replace the combined sixty years of experience that retired with Marjorie Cooper and Debi Hogan. Luckily, both are still available to share those memories with us. Massachusetts Agriculture in the Classroom will renew our determination to continue MAC’s mission and readjust the way in which we do that. Change is often the impetus for creative thinking and daring action. The board members of Massachusetts Agriculture in the Classroom intend to pursue these kinds of changes as we look to the future.

Have any questions or suggestions for MAC?

E-mail us at: info@aginclassroom.org or call us at 508-443-1703 anytime!

Don’t forget to  Like Massachusetts Agriculture in the Classroom on Facebook today!