

October, 2012 Food For Thought

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Calendar

Thursday, October 11,
4-6:30 pm.
New Hampshire History our
Agricultural Legacy Teacher
Workshop
New Hampshire Farm
Museum, Milton NH
Pre-registration required. To
learn more and/or register
[click here](#)

Wednesday, October 24
Food Day

<http://www.foodday.org/>

Thursday, October 25
NH Council of Social Studies
Conference
Radisson Hotel, Manchester
[click here](#)

Friday, October 26
New England Environmental
Education Alliance
Environmental Literacy
Summit

Greetings,

October is a busy month for agriculture and education. Harvesting of apples and winter (storage) vegetables is in full swing, livestock are being prepared for winter, and several educational conferences are taking place. It is National Farm to School month. Learn more at the NH Farm to School website: www.nhfarmtoschool.org. October is also National Apple and Pork Month. The second week of the month is National School Lunch Week and October 24 is Food Day. So there are plenty of reasons and opportunities to teach about agriculture at this time of year.

Another way to learn about NH agricultural history is to attend our hands-on, afterschool workshop being hosted and co-sponsored by the NH Farm Museum. The deadline for registration is Oct. 5. See the calendar listing for details. Before we get too far into October, I'm pleased to report that September went out with a bang. We held the third annual Belknap County School to Farm Day at Ramblin' Vewe Farm in Gilford. This year the event extended to two days and was attended by 325 students, the largest number yet for this event.

I'd like to thank the trustees of Ramblin' Vewe Farm and sheep farmer Jeff Keyser for hosting the event. In addition, our appreciation goes to the Belknap County Farm Bureau for funding the program and providing volunteers. We could not conduct the event without the presenters who share their time and knowledge. This year presenters represented Belknap County Conservation District, Capital Area Beekeepers, Gitch's Funny Farm, Huckins Dairy Farm, NH Farm to School, Ox-K Farm, Prescott Farm Environmental Education Center, Shephard's Hut wool demonstrators, Society for the Protection of NH Forests, and the Suoweic Farm. Moulton Farm provided lunch and refreshments for the volunteers and Cabot/Agri-mark donated cheese samples for the students. An event like this is a team effort and we appreciate all who participated, especially the teachers who brought their students on this educational and fun trip. If you want to learn about School to Farm days in your area, contact me.

Ruth

*Ruth Smith, Statewide Coordinator
NH Agriculture in the Classroom*

Corn, Then & Now

University of New England,
Biddeford ME
<http://www.neeea.org/>

Corn Facts

Corn was used by Native Americans and early settlers as a currency or means of trade and exchange. It was sometimes used to pay debts.

Corn is a member of the grass family, its scientific name is *Zea mays*.

The word corn historically meant any type of grain. What we now call corn was called maize or Indian corn. In 2010 America's corn farmers produced 12.4 billion bushels of corn, enough bushel baskets to circle the globe 127 times. American corn farmers produce 20% more corn per acre than in other parts of the world and more corn than any other country in the world.

A typical ear of corn has about 16 rows and 800 kernels. The number of rows will always be an even number.

There is one strand of silk for every kernel that grows on the ear. The silk is the pollen tube that enables the pollen grain to reach the seed and develop.

There are several types of corn including flint, soft, sweet, dent and popcorn. Ethanol is a type of fuel made from corn. It is added to the gasoline that we use in our cars.

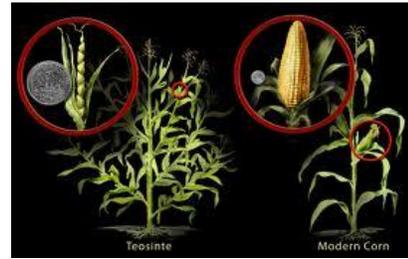
Corn or maize is a grain that was domesticated in Central America and Mexico over 7000 years ago. The wild plant from which corn originated is called teosinte. The seed head is much smaller (about 4") than the corn we know today.

To bring about the change, over thousands of years, the Incas, Mayas and Aztecs systematically collected and

cultivated the seeds of the plants which were best suited for their needs. This was the start of selective breeding and cultivation.

The maize of Mexico and Central America moved up into what is now the southwestern portion of the US through trade. It continued its migration in that fashion until it reached the northeast. Thus when the first European explorers arrived in North America, they encountered American Indians who were well established farmers, growing corn as a regular crop. The Indians typically grew corn in mounds with beans and squash and called their companion plantings, Three Sisters. This method works well because each plant benefits from the others. The corn grows tall and provides a structure for the beans to climb on. The beans are a legume so are able to transfer nitrogen from the atmosphere into a form that is usable for plants in the soil. This is great for the corn which needs a lot of nitrogen. The squashes have broad leaves and grow on a vine which spreads around the other plants. Thus the ground is shaded, weeds are reduced and moisture is retained. Many school gardens have taken up the practice of Three-Sisters gardening because it provides such a wonderful curricular connection to social studies, team work, science and more. See the resource section for books on how to do this, or contact us for assistance. After the settlers learned to grow corn from the Indians, it became widely raised both for animal and human consumption. By the 1800's corn had become a major crop in the United States. It was particularly popular among the frontiersmen who headed west. The vast prairies with their rich soil and flat land provided ideal conditions for growing corn, and other crops. Machines were invented to make the harvesting and husking of corn easier and more efficient.

The crop selection practiced by the Native Americans grew into a more intentional process of hybridization. In the late 1800's plant breeders took varieties with favorable characteristics and cross pollinated them to



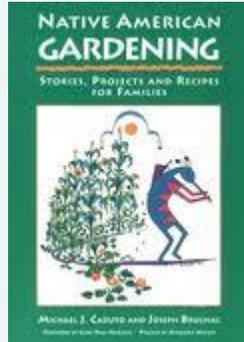
Corn

Resources

Caduto, Michael. *Native American Gardening: Stories, Projects and Recipes for Families*

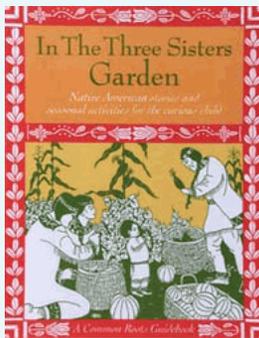
s. Include stories, activities and information on historical

techniques and current opportunities. Fulcrum



Publishing; 1996.

Denne, JoAnne. In the Three Sisters Garden



n: Native American Stories and Seasonal Activities for the Curious Child. A wonderful "how to" guide for teaching about and with Three Sisters Gardening.

Kendall Hunt Publishing Co; 1995.

National Corn Growers Association

<http://www.ncga.com/k-12-resources/>

Provides information for K-12 teachers about the corn growing industry, processes, corn uses, statistics, etc. An activity guide and an excellent

create hybrids. The "off spring" of these new plants were superior to the original plants in terms of meeting the needs of the producers. Some of the characteristics sought after were high yield, pest and disease resistance.

Further scientific research and biotechnology continues to enable farmers to increase their yields and battle some of the challenges of pests, diseases, and weather. Because of its importance, corn is one of the crops being heavily researched and modified to meet changing demands.

Today corn is one of the most important crops grown in the U.S. The majority of it is raised in the Corn Belt - a region of the mid-west that includes Iowa, Illinois, Indiana, Michigan, Minnesota, Nebraska, Wisconsin, Ohio and South Dakota.

Corn is found in more products than most people realize. Less than 1% of our country's corn crop is sweet corn - the kind we eat off the cob, frozen or canned. See the activity section to learn more about how corn is used in ways other than as a recognizable kernel of corn.

Corn Activities

Grinding corn

Students are likely familiar with sweet corn from eating corn on the cob or corn nib-lets. They have also likely eaten corn bread, corn chips and many other products made from corn meal. However, grinding corn to get corn meal is something foreign to most modern children (or adults).

There are several types of corn, grown for very specific purposes. Historically most corn was grown for grinding, but today it is hard to find flour corn, even in health food stores. However, decorative "Indian corn" works well and is edible. Make sure you buy it from a local farm or farm stand and verify that it has not been treated for preservation.

Remove the corn kernels from the cob by twisting the cob in your hands or using a butter knife to pop the kernels off, scraping the cob. This is best done in a deep pot or bowl so the kernels don't fly far. Students can help with this, with proper supervision.

Grinding the corn kernels can be done in a sturdy blender. Use small amounts at a time. A more active way for the children to participate is to put some of the kernels in the bottom of the large pot, lined with an old towel. Use the mallet to pound the kernels. This is similar to the mortar and pestle method used by Native Americans and early settlers. If you have access to a grain grinder, this is also an acceptable method.

poster showing many uses of corn can be downloaded. Also links to other corn educational materials.

Slow Food USA [click here](#)

A brief history of one of the varieties of flint corn that was grown by northern New England (Abenaki) natives and the impact it had on the survival of residents.

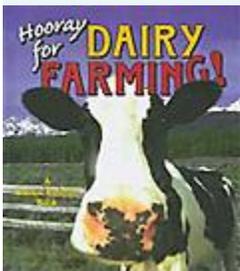
Ten Ways We Use Corn [click here](#)

A description of some of the science and techniques for using corn in many ways other than food.

Ag Literacy Volunteers Needed

Planning for our annual Agriculture Literacy Program has begun. We have chosen the theme of dairy for this year and are looking for volunteers who would be interested in going into schools to read a book about dairy farming to students. The final book has not yet been chosen, but we have a couple of finalists and the decision will be made within the next few weeks.

Past presenters have



included farmers, Farm Bureau members, Ag Commission member

If the kernels broken up by the mortar and pestle method are still quite coarse (which they likely will be) finish them off in the blender. Use a sifter to remove any remaining large pieces. Use the resulting corn meal in your favorite corn bread recipe.

Indian corn is quite starchy and not generally intended for eating (though it is edible). If you wish to extend this activity further, try growing your own flint corn in a school garden.

Materials:

- Indian corn or flint corn, on the cob or as loose kernels
- A large, deep pot
- Old towel
- Mallet
- Sturdy blender
- Flour sifter

Extended learning options

Grow your own flint corn, harvest it and grind it as above. Sources for seed include: High Mowing Seeds (www.highmowingseeds.com), FedCo Seeds (www.fedcoseeds.com)

Grow a Three Sisters Garden to learn about companion planting. [click here](#)

Make succotash. One example of a recipe: [click here](#)

Corn Hunt

Corn is not just used for food. Students will be amazed to learn all the different products that contain corn. Some estimates state that 3 out of 4 items in a typical grocery store contain some form of corn in the product.

Have students read the ingredient lists on various foods that are in their family's kitchen or pantry, or send them to the store to search for corn on various labels. Sometimes it is easy to locate as with high fructose corn syrup, corn chips or corn starch. Other times it is more difficult to know that an item has corn in it. Such ingredients as dextrose, glycerin and citric acid come from corn. See the poster at National Corn Growers Association <http://www.ncga.com/k-12-resources/> for an illustration of many corn based products.

Corn husk Dolls



Corn husk dolls were made by Native Americans and used as toys for their children. Visit the following websites to learn how to make them and explore some of their history and significance.

[click here](#)
[click here](#)

s, 4-H youth, retired teachers, and more. Anyone who is interested in sharing the importance of agriculture with students is welcome to help out. We will provide the book and materials in advance. We will also be looking for community and regional organizers to help schedule programs throughout the state. If you would like to help on that level, please let me know. If you are a teacher who would like to have us come to your class during March or April to present our dairy program and read the book, feel free to get in touch with me.

Contacts:

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Places to Visit

by Deb Robie

Times have certainly changed since I was in school. Some changes are fine. Smaller class sizes, way more technology availability, and more inclusiveness. Some changes are harder to adjust to. Students with more needs, some with little or no help at home and some whose families are so far removed from their food source that they never seem to have enough of the right type of food.

In the coming seasons of Thanksgiving and Christmas let this be a time to help our students learn where their food comes from and throw in some nutrition to boot.

Yellow House Farm in Barrington raises chickens, ducks and turkeys. You can contact them at yellowhousefarm@live.com.

Gould Hill Farm in Hopkinton at www.gouldhillfarm.com is just one of MANY destinations around the state that would love to talk to you about their operation.

There is a type of goats known as "fainting" goats.

Marla Blankenship in Easton loves to talk to groups or families about this very rare breed of goats. Check out her web site at www.WonderFallFarm.com.

East Hill Farm in Troy is home to pork, lamb, beef and goats. Contact them at info@east-hill-farm.com.

What all of these farms have in common is raising good local, healthy food and families. Every community in the state of New Hampshire has access to the UNH Cooperative Extension Service. The folks at the county offices can help you design programs to address nutrition, family dynamics and economic concerns for helping our current students live in today's world. We stand with them to help in any way we can. Check out our national Ag in the Classroom web site at www.agclassroom.org to find fun and innovative ways to help our most important resource our kids.