

September, 2013 Food For Thought

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Greetings,

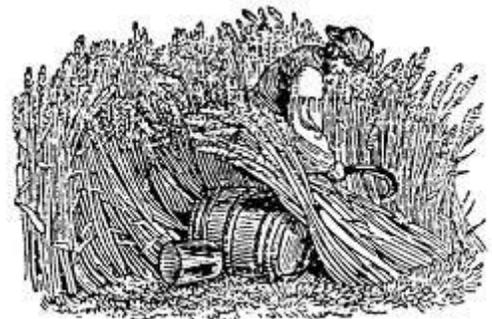
I hope you have all had an enjoyable summer and are ready for a new school year. It's hard to believe it's that time again!

As the new school year begins I'm sure many of you are focusing on how to adjust to the Common Core and the Next Generation Science Standards. While some of these processes and expectations for classroom activities may be new, one thing hasn't changed, agriculture remains an important topic. It is a theme that can easily be integrated into curriculum, regardless of the standards or requirements. Whether your focus is social studies, language arts, science, math, art or music we can help provide you with an engaging hook so that the kids have fun while they learn. Contact us with questions or ideas to flesh out. We are happy to provide resources, come to your school or help with a field trip. Also, if there are topics that you would like to see us focus on for future Food for Thought issues, please don't

Great Grains

Usually we think of cows, sheep and horses as grass eaters. But actually people consume a large amount of grass plants too, at least the seeds from them. The grains we eat - wheat, barley, rice, corn, oats and rye are the seeds or kernels of grasses. The old food pyramid guidelines for nutrition rested on a foundation of grains, suggesting 6-11 servings from this group each day. Grains make up the majority of food eaten around the world and they are a leading export item for our country.

Grains are so important, partly because they are varied and can meet many needs. People have also been utilizing grains for thousands of years. Even before they were cultivated, wild wheat was gathered 17,000 years ago in the Middle East. Many of the links provided in the resource section give details of the history of the cultivation and use of wheat. The *Glorious Grasses: The Grains* book is filled with facts and background for any unit that explores grains.



Cereal grains (except corn) develop kernels that grow at the top of long, thin stalks. The kernels contain food in the endosperm that help the seeds grow into new plants. Those nutrients are also useful for humans and animals. Nutritional lessons fit

hesitate to let us know.

Does your school or district offer staff development days? Would you like to have some hands-on training with activities that are both fun to teach and fun for the kids to learn? NH Ag in the Classroom can provide that. Let us know who to contact to discuss bringing a workshop to your location. I will also be presenting at the NH Science Teacher's conference in Meredith in November. See the calendar section for details.

The focus of this issue is grains. Most of us eat some kind of grain every day. They are found in a huge range of foods, are grown in nearly every state (including New Hampshire) and are an interesting conduit for learning about history, geography, math, and so much more. Check out the resource list for links to some great information and activities. We also have books to borrow from our lending library.

There is still time for Belknap County 4th grade teachers to register their class for the 4th annual School to Farm Days. See the calendar for that as well.

There are many ways for us to work together in the coming school year. I look forward to crossing paths with you.

Ruth

Ruth Smith, Statewide Coordinator
NH Agriculture in the Classroom

Vocabulary

Bran - the outer coating of a wheat kernel.

Bushel - a way to measure a crop.

Chaff - the husk of grains that are separated during threshing.

Germ - the embryo or nucleus of the wheat kernel.

Grain - the seeds of cereal plants such as wheat, barley, oats, rye, millet, rice and corn.

Kernel - another word for a grain seed.

Mill - a place or device that grinds grain into flour

Straw - the stalk or stem of the cereal plant

Thresh - to beat the stems and husks of cereal plants to separate the grains from the rest of the plant.

NHAITC Calendar

September 4

New England Apple Day

<http://www.fosters.com/apps/pbcs.dll/article?AID=/20>

naturally with learning about grains.

Various types of grains grow well in different climates and conditions. Rice is adapted to grow in wet and marshy areas. Millet is drought resistant. Barley can grow in salty soil so does well along coastal regions. Grain characteristics and distribution can make for interesting lessons on geography, environmental conditions and adaptations.

Corn is associated with Native Americans, rice with Asians and barley with the English. There are cultural aspects to the different grains and this diversity is a rich source of learning as well.

Grain Facts

- Wheat is grown in nearly every state (including NH).
- The top 5 wheat producing states are Kansas, North Dakota, Montana, Washington and Idaho.



- More foods are made with wheat than any other cereal throughout the world.
- A bushel of wheat = 60 pounds and yields 42 pounds of white flour or 60 pounds of whole wheat flour
- 7000-6000 BC - Swiss lake dwellers ground wheat kernels, mixed flour and water and baked first known flatbreads.
- 3000 BC - Egyptians cultivated wheat and baked bread
- 1777 - first record of wheat planted in US
- 2008-09 - US farmers grew nearly 2.4 billion bushels of wheat on 63 million acres of land
- There are at least 20 species of rice but humans primarily consume just one.
- Wild rice (such as the type that grows in Minnesota and Wisconsin) is not a true rice, but a different type of grass.
- Corn originated in the Americas and was probably introduced to the rest of

[130829/GJNEWS_01/130829247](http://www.gjnews.com/130829247)

September 24-25

Belknap County School to Farm in Gilford
registration is closed (we're full)

November 3-4

NH Science Teachers Conference in Meredith -
<http://www.nhsta.net/>

November 8-9

NH Farm Bureau Annual Meeting
in Durham
- We're holding a silent auction. Contact us if you
you'd like to donate a product or service.

Agricultural Fairs:

Hillsborough County Agricultural Fair
New Boston
September 6-8
www.hcafair.com

Rochester Fair, Rochester
September 13-22
www.rochesterfair.com

Deerfield Fair, Deerfield
September 26-29
www.deerfieldfair.com

Sandwich Fair, Sandwich
October 12-14
www.thesandwichfair.com

Ag Book Sale

American Farm Bureau Foundation for Agriculture

Back to School Book Sale
through September 21
Check out a large collection of agriculturally appropriate
books.

<http://www.agfoundation.org/index.php?action=order>
[s](#)

Contacts

NH Ag in the Classroom

the world when Columbus and other
early explorers took it back to Europe.

- Millet is related to crabgrass.
- Oats are thought to have originated in
northern Europe and are adapted for
growing at higher elevations, with cool
short growing seasons.
- Oats are primarily grown for animal
feed, but oatmeal is a favorite food in
the British Isles and elsewhere.

Grain Resources

Bread Comes to Life by George
Levenson This book tells how a baker raises
his own wheat and makes it into bread - step
by step. This website provides classroom
activities, background information, fun facts
and a way to order the book and video.
<http://www.informeddemocracy.com/bread/breadShopFrmSet.html>

edible White Mountains, Fall 2010, Issue 6:
"Waves of Grain - The Next Locavore Frontier"
by Ruth A. Smith.
<http://onlinedigeditions.com/publication/?i=45638&p=3>

Glorious Grasses: The Grains by Meredith
Sayles Huges. This book gives incredible
history, cultural information, nutritional insights,
recipes, facts and photos. Lerner Publications,
1998.

Growing Grains in New Hampshire - NH Farms
Network - article about Tuckaway Farm in Lee
where grain growing is being brought back and
tested.
<http://www.newhampshirefarms.net/farm-profiles/strafford-county/tuckaway-farm-lee-nh.html> 2011.

*Homegrown Whole Grains: Grow, Harvest and
Cook Wheat, Barley, Oats, Rice, Corn and
More* by Sara Pitzer. A comprehensive and
easy to use guide for backyard or school
gardeners. 2009.

Littleton Grist Mill. Learn about the history of
this mill, built in Littleton NH in 1797 and still
operating today.
<http://www.littletongristmillonline.com/>

Kansas Agriculture in the Classroom.
Celebrate Wheat - activities for grades 3-5
<http://www.ksagclassroom.org/classroom/lesson/wheat.html>

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Kinds of Grains by Sara E. Hoffman. This children's book is about different kinds of grains and the nutritional value of them. 2012.

Macaroni and Rice and Bread by the Slice: What is in the Grains Group? By Brian Cleary. A zany rhyming text introduces young readers to the food in the grains group. 2010.

Montana Wheat and Barley Committee. The "Teacher & Students" section of this website has games, puzzles, fact sheets and books that provide educational opportunities for learning about wheat. http://wbc.agr.mt.gov/wbc/Consumer/Teachers_students/

North Dakota Agriculture in the Classroom. ND Ag Mag - Wheat contains information and activities, copies can be downloaded or ordered. An accompanying teacher guide is also available. <http://www.ag.ndsu.edu/agmag/wheat/>

Small-Scale Grain Raising by Gene Logsdon. This book tells everything you need to know about raising and using major (and some minor) grains. 2009.

Utah State Agriculture in the Classroom. "Grains of the World" kit and journal. An educational kit for grades 4-9 can be purchased for \$3 or the written material can be downloaded for free. <https://utah.agclassroom.org/cart/Details.cfm?ProdID=315&category=0>

Wheat Food Council - this website has a wide range of information about wheat. A well illustrated fact sheet provides information about the plant and the milling process. <http://wheatfoods.org/resources>

Sugar Detective Activity

Cereals (from the box) are more than Grains

This activity illustrates the interaction between sugar and yeast and helps identify the sugar content in common cereal products.

[Read more Sugar Detective](#)