

Massachusetts Agriculture in the Classroom

**Social Studies
Economics
Nutrition
Science**



Workshops on the Farm

\$40 Each Workshop - 9 a.m. to 3 p.m.

Pollinator Workshop

Wednesday, July 15th
UMass, Amherst

Math With a Tree or a Whole Forest

Thursday, July 16th
Curtis Farm, Westminster

More Vegetables for School Gardens

Wednesday, July 22nd
Cooks Valley Farm, Wrentham

Agriculture at the School Everyday!

Thursday, July 23rd
Hawlemont School, Charlemont

Exploring a Family Dairy Farm

Wednesday, July 29th
Cooper's Hilltop Dairy Farm, Rochdale

Preserving the Harvest

Thursday, July 30th
Alderbrook Fm & N Dartmouth Grange

Summer Graduate Course

Thursdays July 9th and August 6th
six additional farm/garden workshops

Summer Conference: Connecting the School Garden and the Curriculum

Tuesday, August 4th \$50
Tahanto Regional Middle/HS, Boylston

Feature Topic:

Where In the World: Did The Foods We Grow Originate?



The mission of Massachusetts Agriculture in the Classroom is to promote agricultural literacy among educators and to provide them with the skills and support to integrate agriculture into their classrooms.

MAC's Executive Director Says Goodbye and Thank You

In the summer of 1986, I moved to Massachusetts from my home in Philadelphia to start the children's programs for the Massachusetts Horticultural Society. It was just a few months later, when Massachusetts Agriculture in the Classroom reached out and asked me to join them as a member of their Board of Directors. I was so impressed with this young energetic organization that had big plans and dreams for bringing agriculture to classrooms and students across the state. And the Board had plans for me as well! At the February 1987 Annual Meeting, in my absence, I was elected the new secretary of the organization, a position I held for the next seven years.



On April 5th, Debi Hogan celebrated 20 years of stewarding MAC's educational programs, the last six years as Executive Director.

In April of 1995, MAC again asked me to take on a leadership role, as their new education coordinator. At first, I worked just five hours a week organizing the files and papers that had come to us from our former office at UMass, and coordinating the Mini-Grant program, founded in 1992. In the first year, with Board leadership we developed a mailing list, initiated a seasonal newsletter for educators and conducted a few workshops for teachers on the farm. From those roots, MAC's educational programs have grown to include multiple workshops on the farm, three annual conferences, a summer graduate course, on-line lessons and school garden guides, school garden mentoring, an active website, expanded mini-grants and teacher awards, as well as three seasonal newsletters, each with a four-page teacher resource. Most importantly, our programs and resources are now supporting classrooms, farm educators and school gardens in every community across the state.

The past twenty years have been an amazing journey for me, and I am so grateful to all the people I have met along the way. MAC's dedicated Board of Directors have donated multiple thousands of hours managing the organization and providing guidance, review and agriculture education training. I have learned so much from each of you and have valued your advice and counsel. There have also been so many generous farmers who have welcomed teachers to your farms, sharing your knowledge of agriculture. I thank you for your support and belief in our small non-profit and the work that we do. Finally, and most importantly, I treasure the opportunity I have had to meet so many truly amazing educators, and to learn about all the wonderful things that you are doing with your students in your classrooms, schoolyards and on the farm. You are our unsung heroes and the reason that this small organization exists. It is your commitment to children and learning that have kept me motivated for so many years.

Two years ago my life changed dramatically, when my own family farm required a much bigger commitment of my time and energy. The Board has been working since then to plan for the impending transition. I shall miss you all when I leave MAC at the end of April, but know that you and this remarkable organization will keep going strong. Warren and I invite you to visit us at the nursery during the growing season.

Debi Hogan, MAC's Executive Director is also co-owner of Tranquil Lake Nursery in Rehoboth.

New Executive Director

MAC is happy to welcome **Kaisa Holloway Cripps** as our new Executive Director. She starts May 1, and brings a diverse background



of experience to the organization. She has been a newspaper editor, university professor in marketing and sustainability, planning board commissioner and winery manager. Her experiences in both the corporate and non-profit world give her a unique understanding of marketing, communications, and the importance of sponsorships and partnerships.

Kaisa and her family manage a winery in the southeastern part of the state where she is also active in volunteer work and local government. While doing all of this, she is working on her PhD. She states that "agriculture has been a vital part of my life and development personally and professionally...MAC is an organization which aligns with my personal values." MAC's Board of Directors are very happy to welcome her as she assists us in continuing the great work educating teachers in agricultural literacy.

Mini Grants

In November, the MAC mini-grant committee awarded \$825 to **Susan Ebitz** and the fourth grade students at **Muddy Brook Elementary School** in **Great Barrington**. The project will expand an existing program to all fourth grade classrooms. Students incubate and hatch eggs and then care for the chickens. Eggs are sold to the staff and general public, raising funds that are donated to support *Berkshire Bounty* and *Heifer Project International*. The project directly impacts 92 fourth grade students in four classrooms.

Any Massachusetts teacher or school can apply for a mini-grant to support their agriculture in the classroom efforts. Each year MAC awards mini-grants, usually in the amount of \$300 to \$500, to teachers for agricultural education projects. Proposals are due the first of April, September and November. To receive a copy of our mini-grant guidelines, visit our website or send a letter to MAC.

MAC's New Co-Presidents

Ken and Bobbie Oles are now Co-Presidents of Massachusetts Agriculture in the Classroom. It is, indeed, an honor to follow Marjorie Cooper's Presidency and Debi Hogan's time as Executive Director knowing the many achievements of their tenure. We are lucky that both of these hard working leaders have given so generously of their time and expertise and will still be available for consultations. We thank Marjorie and Debi for their decades of leading MAC to the forefront of agricultural education in the state.

A former elementary school teacher for 35 years, Ken Oles has been a member of MAC's Board of Directors for 18 years. During that time, he has served the board in many capacities including Chair of the Mini Grant Committee and MAC's Teacher of the Year in 2001. Now, retired from teaching, he keeps busy as a Hall of Fame Master Gardener at URI, Beekeeper, and Gardener. As the instructor for MAC's Summer Graduate Course, he presents the lessons at the Workshops on the Farm.

Bobbie Oles, a former educator and administrator, has volunteered at many of MAC's workshops and conferences. Her first experience with MAC was attending, with Ken, the Summer Workshops on the Farm. Ken and Bobbie led the Summer Graduate Course for the past three years and will continue in that capacity.

Ken and Bobbie look forward to leading MAC during this exciting time of transition. We welcome new challenges as we continue the work of MAC and explore new ways to increase public awareness of the organization and its mission. Changes are sometimes not easy, but we are privileged to play a significant role in the coming year as we continue in Massachusetts Agriculture in the Classroom.



Bobbie and Ken Oles, new Co-Presidents of Massachusetts Agriculture in the Classroom

AgriScience Excellence Award



Jeanne Bruffee from Hawlemont Regional School in Charlemont was presented with the 2015 AgriScience Excellence Award in March.

The Board of Directors of MAC along with the **Massachusetts Trustees of Eastern States Exposition** are pleased to announce that our 2015 winner of the **AgriScience Excellence Award** is **Jeanne Bruffee**, Title 1 Reading Teacher at **Hawlemont Regional School** in **Charlemont**. This award is given to a teacher who has done an outstanding job of bringing agriculture to the classroom. The prize is accompanied by a plaque, \$200 classroom grant and a fall trip to The Big E for the teacher and students.

Jeanne coordinates the **H.A.Y. (Hawlemont, Agriculture, & You)** program at the school, teaching a lesson weekly to each classroom. She works with local farmers and community members to bring enriching experiences to the students, arranging for various farm animals to live at the school with accompanying lessons. Jeanne also implements a farm chore schedule for students in order to teach responsibility and proper care for the animals. She also works closely with teachers to help them develop their own agriculturally-based lessons. Through collaboration with 4-H, Jeanne has also created a thriving 4-H after-school program for students at Hawlemont.

Jeanne tells us, "we feel very fortunate at Hawlemont to be able to offer a hands-on learning that is focused on agriculture. We have seen a change in attitude by many children, of their enthusiasm towards learning and the willingness and excitement of sharing and reflecting on their discoveries. From chores to creative writing the student engagement is high. We are extremely vested in this program and committed to making this grow and expand." Congratulations, Jeanne!

Resources for Where in the World: Did the Food We Grow Originate?

Mass. Dept. of Agricultural Resources
www.mass.gov/agr

Mass. Fruit Growers Association
www.massfruitgrowers.org

New England Vegetable Growers Guide
www.umassvegetable.org

Concord Grape Association
www.concordgrape.org

Concord Grape Growers Cooperative
www.concordgrapejuice.com

Food History News
www.foodhistorynews.com

Cape Cod Cranberry Growers Association
www.cranberries.org

Ocean Spray Cranberries
www.oceanspray.com

Cranberry World Museum
225 Water Street Plymouth, MA 02360

The Highbush Blueberry
<http://umaine.edu/publications/2253e/>

The History of Cucumbers
www.vegetablefacts.net/vegetable-history/history-of-cucumbers/

How the Potato Changed the World
Smithsonian Magazine
www.smithsonianmag.com/ist/?next=/history/how-the-potato-changed-the-world-108470605/

Strawberry History
University of Vermont
www.uvm.edu/vtvegandberry/factsheets/strawberryhistory.html

The Carrot Museum
www.carrotmuseum.co.uk/

The Food Timeline
www.foodtimeline.org/

Hungry History
www.history.com/news/hungry-history

The History Kitchen
www.pbs.org/food/blogs/the-history-kitchen/

The Food Museum
www.foodmuseum.com/

Tomato History by Sam Cox
<http://landscapeimagery.com/tomato.html>

*Information for this newsletter
was taken from the resources listed above.*

Where in the World: Did the Foods We Grow Originate?

When we think about how the foods that we eat have been affected by immigration, we tend to think about specific dishes or recipes that have been brought by our ancestors. But what if we delve deeper into these foods and look at their component parts. Where did these foods originate? How did the tomato, pear, blueberry or carrot come to be part of our gardens in Massachusetts? Are they native to the area, did they migrate on their own, or was their human interaction that brought them here? These are questions we will seek to answer by highlighting a selection of agricultural products and their histories in Massachusetts. Then we will look at ways of incorporating these histories into the classroom.

Concord Grapes

Grapes belong to the family **Vitaceae**. They are juicy berries, with thin skins. They grow on vines in clusters as small as six, or as large as 300 berries. Grapes may be black, blue, golden, green, purple, red or white.

Originating in both hemispheres, grapes grow all over the world, both as wild vines and in tended vineyards. They are used as a source of table fruit, raisins, vinegars and wines. More than 8,000 varieties have been hybridized for cultivation from the **European Grape** (*Vitis vinifera*) and the **North American Fox Grape** (*Vitis labrusca*) and **Muscadine Grape** (*Vitis rotundifolia*). Of these, fifty varieties are grown for fresh eating, a few for grape juice or to make currants, raisins or sultanas (white raisins) and most become wine. About 66 million metric tons of grapes are harvested annually throughout the world.

The European Grape, *Vitis vinifera*, was cultivated as early as 6000 BC in the region between the Black and Caspian Seas near present day Northern Iran. There in the Zagros Mountains, clay vessels containing grape residue have been found dating back to 5000 BC. Grape cultivation progressed south and west from there.

European explorers eventually spread *Vitis vinifera* vines to

southern Africa, Australia and the Americas. Spanish established the first vineyards in Mexico as early as the 1520s.



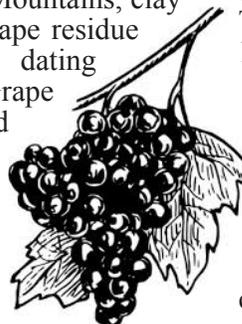
More than 40 species of native grapes grew wild in North America. The Massachusetts colonists tasted these grapes and attempted to make wine from them. They describing the taste as “foxy” or “musky” and soon imported the more familiar *Vitis vinifera* from Europe. Wine was so important to these early colonists, that more than 20,000 acres of grapevines had been planted by the early 1700s. **Governor Winthrop** took over Governor’s Island in Boston for the purpose of growing grapes. Unfortunately, these imported vines quickly died. Only those grapes bred from native species or hybrids of European and native grapes succeeded.

The **Concord Grape** was developed by **Ephraim Wales Bull** in 1849. He experimented with the native wild grapes he found on his farm and created a grape that ripened early to avoid the early frost but was still rich and full of flavor. The Concord Grape grew in popularity after New Jersey native **Dr. Thomas Welch** began using them for juice in 1869, revolutionizing the bottled juice industry in the U. S.

Cranberries

The cranberry is a unique fruit; its vines thrive on the special combination of soils and hydrology found in wetlands. Natural bogs evolved from glacial deposits which left impermeable kettle holes lined with clay. These beds became filled with decaying matter. As the ice melted it created the ideal environment for cranberries.

The cranberry is native to Massachusetts and has helped sustain Americans for hundreds of years. Native Americans used cranberries in a variety of foods. The most popular was **pemmican** - a high protein combination of crushed cranberries, dried deer meat and melted fat. They also used cranberries as a medicine to treat arrow wounds and as a dye for rugs and blankets. The pilgrims learned to use cranberries from the native Americans during the 1600s. The first cranberry juice was made by settlers



in 1683. Cranberry cultivation began around 1810, shortly after **Captain Henry Hall**, of Dennis, noticed that wild cranberries in his bog grew better when sand blew over them. Captain Hall began transplanting cranberry vines, fencing them in, and spreading sand on them. The technique was quickly copied. By the 1820s, cranberries were being shipped to Europe for sale.

Blueberries

The blueberry is a fruit indigenous to North America and has been used for food and medicine for centuries. When Europeans arrived on the continent, Native Americans were eating blueberries year-round. They dried blueberries in the sun and added them whole to soups, stews and meat, and also crushed them into a powder to use on meat as a preservative.

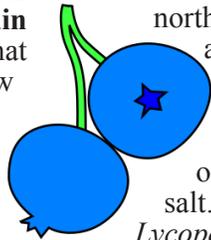
Blueberries were used for medicinal purposes, and Native Americans developed one of the first blueberry baked goods. **Sautauthig**, a simple pudding made with blueberries, cracked corn and water was a Native American favorite. Sautauthig became popular among the settlers too. They added milk, butter and sugar to the recipe. Many historians believe it was part of the first Thanksgiving feast.

It was not until the early 20th century that blueberries were domesticated and produced commercially. The first commercial crop was grown in 1916 after a New Jersey farmer cultivated a new breed of blueberries that grew in large bushes and could be easily tamed.

Tomatoes

The tomato belongs to the genus **Lycopersicon**, and is a member of the Nightshade family (Solanaceae), along with potatoes, eggplants, peppers, tobacco and the very poisonous belladonna or nightshade. Tomatoes originated in the tropics, where they are perennial. In colder climates they are an annual. They will die after frost and must be replanted from seed each year.

The tomato is believed to have originated on the western coast of South America, in what is now Peru, Bolivia, northern Chile and Ecuador. Wild tomatoes can still be found in this area, including eight different species in Peru.



From Peru, the tomato was brought north to Central America around 700 AD, where it was domesticated. Ancient Aztec writings mention dishes of tomatoes, peppers and salt. Tomatoes of the species *Lycopersicon esculentum cerasiforme* were widely cultivated throughout Central America when the first Conquistadors arrived in the 1500s. This species is thought to be the direct ancestor of cultivated tomatoes. In fact, it still grows wild in Central America, producing small, cherry-like fruit on a creeping vine.

The Conquistadors brought tomatoes to Spain. From there, they spread through travel to Italy and France, flourishing in the warm Mediterranean climate. They were used in recipes from the late 17th century onward. Early development of new and hardy strains was centered around the Mediterranean. By the mid-18th century there were more than 1,000 varieties cultivated throughout Spain, Portugal, Italy and southern France.

Northern European countries regarded the tomato as a curiosity and grew it only as an ornamental for over a century. Eventually, with the availability of glass-houses that could extend the growing season, they grew tomatoes for food.

When tomatoes were first introduced to the colonies in North America, they were used primarily as a medicine for pustule removal. By the mid-18th century, they were cultivated in the Carolinas, and by the late 1700s the migrating farmers took tomato cultivation north and west. **Thomas Jefferson** introduced them to his table in 1781. By the early 19th century tomatoes were widely used in cooking. The earliest record of marketing tomatoes are from the early 1800s in Europe. By 1835, tomatoes were sold in Boston's Quincy Market.

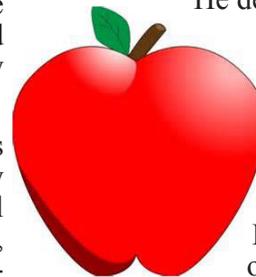
Apples

The apple is a temperate-zone fruit, requiring a three-month dormant period in order to set fruit in the spring. Since the apple requires a winter season, historians believe that the

apple originated in northern Europe, possibly in the Baltic countries or in the Caucasus Mountains of Asia.

The relationship between apples and humans existed long before recorded history. The pharaohs of Egypt had planted apples along the Nile delta by the 13th century B.C. and the ancient Greeks had them by the 7th century B.C. By the first century A.D, thirty-to-forty varieties were grown by the Romans, who have been credited with bringing the apple to England. The Spaniards brought apples to Mexico and South America in the 16th century. When English colonists arrived in North America they found only crabapples. The first cultivated apples in the new land, were planted on Beacon Hill in Boston by an Episcopalian minister named **William Blaxton** (or Blackstone) who arrived in 1623. After one year, the Episcopalian settlers moved back to England, but Blaxton remained, raising his young orchard.

He developed the New World's first apple - 'Blaxton's Yellow Sweeting.'



In 1630, a new group of Puritans arrived in Boston Harbor, banishing Blaxton to Rhode Island. They took over his apple orchard, and furthered apple cultivation

by importing honeybees. Later, their leader, **John Winthrop**, sent bees and apple seeds to Blaxton in Rhode Island. By the 1640s, orchards were well established. Nearly all land owners planted apple trees. When the frontier was pushed westward into the Ohio Valley and Great Lakes areas, apples soon followed. A Massachusetts man, named **John Chapman** or "Johnny Appleseed," became famous for planting trees throughout Ohio, Indiana and Illinois.

By the 1740s, American apples were being exported to the West Indies. Over 8,000 apple varieties have been named worldwide. As many as 2,500 different varieties are grown in the U.S. However, only a hundred of these are grown commercially, and just 10 varieties make up 90% of the production. New varieties are still being discovered and cultivated, with the best eventually becoming "household words" such as McIntosh, Delicious, Empire, Rome, Braeburn and Liberty. More than a



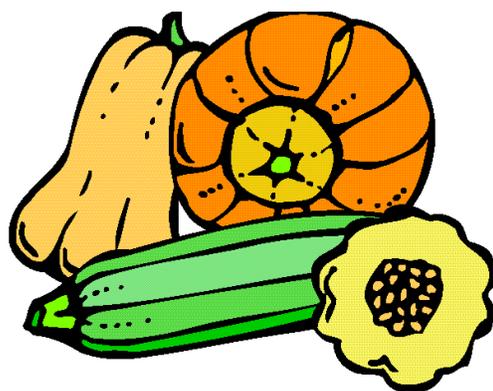
few “throwbacks” to antique varieties are also enjoying a resurgence.

In our modern orchards, apple growing is a specialized and skilled profession, combining the rich heritage of apple culture with research and field trials to grow an annual U.S. crop exceeding 220 million bushels. The majority of apple orchards are family-run farm businesses. This highly seasonal enterprise is as varied as the days in a year, with each day bringing a new chance to test the orchardist’s skills against the measure of the eventual harvest. Today’s grower must have knowledge of soil, weather, pomology, insect life, plant diseases, machinery, economics, accounting, record keeping, marketing and more.

Pumpkins and Squash

The squash and pumpkin group includes members of four species of the gourd family, **Cucurbitaceae**. Pumpkin comes from the Greek word *pepon*, meaning a large melon. Squash gets its name from the Algonquin word for squash “askootasquash.”

Most of our pumpkins and squash originated in South America and Mexico where remains of wild or cultivated squash have been found dating back to around 9000 B.C. Pumpkin seeds have also been found in ancient Asian ruins, and may have also been grown centuries ago in Africa and Indonesia, since they are part of the myths of the people there. These ancient squash and pumpkins were quite different from the varieties that we know today; most wild forms are small and bitter. It is believed that squash fruits were originally collected to make into rattles for ceremonies and dance. Later they were used like gourds, for dishes and storage vessels. Finally, farmers began to grow and select improved varieties for food crops.



First they were grown for their oily, protein-rich seeds and later, as better tasting varieties were selected, they were eaten for their flesh. The



Native American Indians were growing pumpkins for foods for hundreds of years before the first Europeans came to America. Along with beans and corn, squash was one of the great staple crops of ancient America. The Native Americans planted them in mounds around their corn. They used the squash and pumpkin pieces in their stews and fed them raw to horses. The settlers learned how to grow and use squash and pumpkins from the Native American Indians. They soon became a favorite garden vegetable.

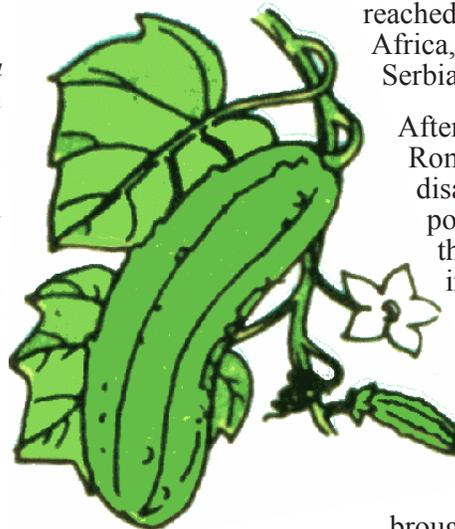
Cucurbita maxima originated in South America and is probably native to Bolivia and Argentina. Plants have long, bristly vines and large leaves. They tolerate cool temperatures and are well adapted to areas as far north as Canada. This species includes types of winter squash such as Buttercup, Blue Hubbards, Turk’s Turban and “French” pumpkins.

Cucurbita mixta includes many of the traditional winter squashes known as cushaws, which have been grown since early times from Guatemala to the southwestern U.S. Members of this species are drought-tolerant and their flesh is generally paler, stringier and less sweet than other types of squash. *Cucurbita moschata* originated in the tropical lowlands of Central and South America and grows best in areas with warm night temperatures and high humidity. Plants have large leaves, sprawling vines and smooth five-sided stems. The species includes the winter crookneck squashes, of which “Butternut” is the most widely grown. This popular hybrid variety was bred in Waltham, Massachusetts by **Bob Young** and patented in 1970.

Cucurbita pepo squash grow on either bushy or vining plants. The species includes all of the popular types of summer squash, scallop or pattypan, summer crookneck and zucchini. Stems are five sided and spiny. The species also includes many of the pumpkins used for Jack-o-lanterns and pies as well as acorn squash.

Cucumbers

Cucumbers originated in Ancient India where they grew in the wild. Early Indian civilization domesticated cucumber and started infusing it into their cuisine. Soon they started trading with Middle Eastern civilization and Europe. Later, Greek civilization embraced cucumbers and started calling them *sikyon*. During that time period, cucumbers also reached Turkey, Bulgaria, Africa, and Modern-day Serbia and Italy.



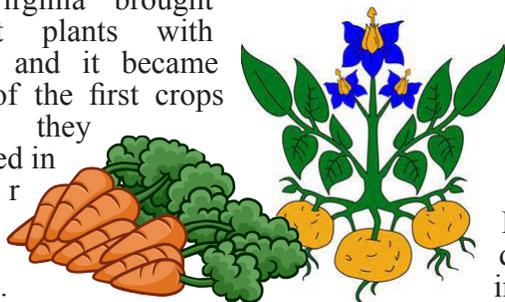
After the fall of ancient Rome, cucumbers disappeared from the popular diet until they resurfaced in the court of **Charlemagne** in 8th and 9th century, and arrived in England in 14th century. **Christopher Columbus** brought cucumbers to

Haiti in 1494 where they were grown by Spanish settlers and distributed further across the New World. During the 16th century, European trappers in North America introduced cucumbers to Native Americans in the region of Great Plains and the Rocky Mountains. Those tribes quickly saw the potential and nutritious value of cucumbers and watermelons, integrating them into their fields. During the 18th century, expansion of cucumbers across North America suddenly stopped when several medicinal journals reported that cucumbers and all similar vegetables that were not cooked represented serious health risk. Discouraged by those misconceptions, cucumber use plummeted across the continent. This trend was reversed only in 19th century when they again gained popularity.

Carrots

Originally a native of Persia, carrots have been grown for centuries. Over this time, they have been selectively bred to increase the sweetness of the carrot itself and the pleasant aroma of their leaves. Though originally grown for their scented leaves, they soon became a food source grown all over the world.

Carrots were brought to America with European explorers during the 16th century. The first carrots in the New World were planted by Spanish Conquistadors on an island off the coast of Venezuela. English settlers in Virginia brought carrot plants with them and it became one of the first crops that they planted in their new home.



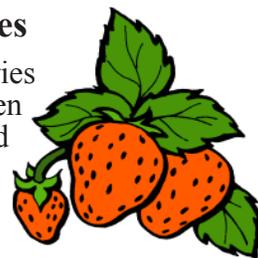
Potatoes

Potatoes arrived in the Colonies in 1621 when the Governor of Bermuda, **Nathaniel Butler**, sent two large cedar chests containing potatoes and other vegetables to **Governor Francis Wyatt** of Virginia at Jamestown. The first permanent potato patches in North America were established in 1719, most likely near Londonderry, NH, by Scotch-Irish immigrants. From there, the crop spread across the country.

Idaho, the present-day, largest producer of potatoes, actually did not begin growing potatoes until 1836, when missionaries moved west in an effort to teach the native tribes to grow crops instead of relying upon hunting and gathering methods. However, it wasn't until 1872 when the Russet Burbank variety was developed, that the Idaho potato industry began to flourish.

Strawberries

Wild strawberries have been eaten by people around the world since ancient times, but not in large quantities, since the fruits were small or tough or lacked flavor.



In the 1600s, settlers in Virginia discovered a hardy strawberry plant that they began to export to Europe. At the same time, a French explorer brought the Chilean strawberry back to Europe, this berry was much larger than any other breed and had a more pleasant appearance. As this berry was not as hardy as its Virginian cousin, the two species were crossed in Europe and the modern strawberry was created. Though this was initially done by accident, the result was so profitable that all modern strawberries can trace their lineage to this pairing.

Where in the World?

Trace the roots of domesticated animals to learn where and when they were first raised to benefit humans.

Honeybees are thought to have originated in Southeast Asia or Africa. They were first domesticated by ancient Egyptians in the 9th century.

Chickens were first domesticated around 8,000 years ago in Southeast Asia. They were bred from red junglefowl.

Goats were first domesticated in the Zagreb mountains of what is now Iran around 10,000 years ago.

Pigs were domesticated from wild boar as early as 13,000 B. C. in the Tigris River Basin in Africa.

This educational resource on "Where in the World The Food We Grow Originated" was funded by a grant from the Massachusetts Trustees of Eastern States Exposition. The article was researched and written by Christopher Szkutak.

Massachusetts Agriculture in the Classroom
P.O. Box 345 Seekonk, MA 02771
www.aginclassroom.org

Fairs and the History of Food

Elkanah Watson, known as the "Father of United States Agricultural Fairs" founded the first county fair in 1810 in Pittsfield. His goal was to bring together the best of agriculture in the county and encourage the use of best practices in agriculture. He did this by incorporating competition into the science of growing. Farmers wanted to produce items to win prizes at the fair and thus they would learn innovative growing techniques that other farmers found successful.

Today, agricultural fairs still provide opportunities for farmers to show off the best of their produce and share it with the public. The prime purpose of all agricultural fairs in the Commonwealth of Massachusetts is the promotion of agriculture. They also provide an annual celebration for the community to come together and have fun, while they share and learn. Fairs offer a wonderful way to enjoy the richness and variety of what the state and world has to offer. Find a fair in your local town or county at <http://www.mafa.org>.

Lesson Ideas

 Have students select a vegetable, fruit, or other crop and write a biography of that food.

 Have students create a food map of where the components of their favorite foods originated.

 Encourage students to select their favorite meal and find a recipe for it. Look at each part of the recipe, where did these foods come from? Where are they grown today?

 Have students explore the question of how plants are domesticated. How did the wild strawberry or blueberry change into a reliable commercial product?

 Make a mural of how foods arrived in Massachusetts and New England, how did they get here and who brought them?



Workshops on the Farm

Join us for one of more of our summer workshops and gain knowledge and resources while you explore local farms. Each workshop runs from **9 a.m. to 3 p.m.**, offers classroom-ready activities and focuses on one unique aspect of agriculture with exploration of the work that takes place at that farm. The fee of \$40 includes lunch and all materials.

Pollinators play an important role in our lives and habitats. On **Wednesday July 15**, travel to **UMass Amherst** where a new Pollinator Garden was funded by the **Mass. State Grange**. We'll utilize the garden to review pollinator needs during their various life stages. You'll also see a selection of plants with flowering characteristics that will benefit pollinators and also complement the school calendar. Try out some of MAC's Pollinator lessons.

Travel to **Curtis Farm** in **Westminster** on **Thursday, July 16**, where we'll spend the day learning about forests and tree with owners **JoAnn and Chris Mossman**. Learn how proper woodland management preserves the health and resources of this unique woodland. Try out some Math and Project Learning Tree lessons.

Wednesday, July 22 takes us to Cook's Valley Farm in **Wrentham**. Spend the morning learning about plants for the school garden that will accommodate different garden sizes, seasons, soil and light conditions and summer schedules, with Master Gardener **Ken Oles**. In the

afternoon, investigate this 90 acre, 12th generation farm, originally a grant from the crown. Owners **Warren and Marilyn Cook** will share the farm's history.

The **Hawlemont School** in **Charlemont** instituted a school-wide agriculture program in 2013 called **Hawlemont, Agriculture, & You**. On **Thursday July 23**, we'll visit this unique school to learn how teachers, administrators and the community came together to bring agriculture to life school wide. Meet the animals, see the garden and try out some lessons with our AgriScience Excellence Award winner for 2015 **Jeanne Bruffee**, principal **Wayne Kermenski** and some of their colleagues.

Dairy farming in Massachusetts is a challenge. Those that have remained have developed innovative techniques to bring the milk to the consumer or the customers to the farm. On **Wednesday, July 29**, travel to **Cooper's Hilltop Dairy Farm** in **Rochdale** to learn from the family about this small farm that processes and sells all their milk on-site and how the farm is changing with a new generation.

Come to **Alderbrook Farm** in **South Dartmouth** on **Thursday, July 30**, to meet farmers **Nancy and Allen Manley** as they give a tour of their gardens and farm animals. Later, we'll review methods of storing and preserving vegetables and have hands on lessons concentrating on pickling and fermentation in the commercial kitchen of **North Dartmouth Grange #162**. The Grange will explain about their unique plan that involves community use of the site. You will also receive recipes.

Summer Graduate Course

Check out our 3-credit Summer Graduate Course co-presented with **Fitchburg State University**. The course meets **Thursdays, July 9 & August 6** in North Grafton from 9 a.m. to 3 p.m. Each participant will attend both sessions and participate in six additional workshops on the farm. The fee for the three graduate credits, eight workshop days, materials and meals is \$500.



Summer Conference

MAC's 3rd Annual Summer Conference "**Connecting the Classroom to the School Garden**" will be held at **Tahanto Regional Middle High School** in **Boylston** on **Tuesday, August 4th** from 8:30 a.m. to 3:30 p.m. The conference provides teachers with activity ideas, resources and curriculum connections to support school gardens efforts. Four concurrent workshop sessions will be held, with a choice of four-to-five concurrent workshops in each session. The \$50 fee includes all workshops; breakfast snack and lunch. Scholarships are available for new and urban teachers and farm educators from **Northeast Farm Credit AgEnhancement**.

Annual Fall Conference

Mark your calendar. Our 6th annual **Fall Conference for Educators** will be held **November 7th** at the **Clay Science Center of Dexter & Southfield Schools** in **Brookline**. \$50 fee includes lunch and all materials. Scholarships are available.

REGISTRATION ... DONATION... MATERIAL ORDER FORM

Please fill out this form and return it to: MAC, Inc. P. O. Box 345 Seekonk, MA 02771

Name _____

School or Organization _____ Address _____

City _____ State _____ Zip _____

Phone Number (day) _____ (evening) _____ e-mail _____

I am registering for the following workshop (s): \$40 enclosed for each workshop registration, please send directions

- | | |
|---|--|
| <input type="checkbox"/> July 15, Pollinator Workshop, UMass, Amherst | <input type="checkbox"/> July 16, Curtis Farm, Westminster |
| <input type="checkbox"/> July 22, Cook's Valley Farm, Wrentham | <input type="checkbox"/> July 23, Agriculture at School Everyday in Charlemont |
| <input type="checkbox"/> July 29, Cooper's Hilltop Dairy Farm, Rochdale | <input type="checkbox"/> July 30, Preserving the Harvest, South Dartmouth |
| <input type="checkbox"/> I am registering for the August 4, Summer Gardening Conference <input type="checkbox"/> \$50 is enclosed (Make Check payable TO MAC) | |
| <input type="checkbox"/> I am registering for the Summer Graduate Course <input type="checkbox"/> \$500 is enclosed (Make Check payable TO MAC) | |

Please send information on: Summer Graduate Course; Summer Conference on Aug 4; Fall Conference on Nov. 7;

I'd like to make a tax-deductible donation in the amount of: \$50; \$25; \$10 Other donation _____



Calendar

- 🌱 **May 14 - Mass. Envirothon**, focus on Climate Change at Quabbin Reservoir in Barre, www.maenvirothon.org.
- 🌱 **May 15, "Plant Something"** from MNLA & MA Flower Growers Assns. at www.plantsomethingma.org.
- 🌱 **May 16 - Gardener's Fair** at Mass. Horticultural Society's Elm Bank in Wellesley, visit www.masshort.org.
- 🌱 **May 19 - Great Tomato Giveaway & Heirloom Plant Sale** at Old Sturbridge Village, visit www.osv.org.
- 🌱 **May 23-24 - 41st Annual MA Sheep & Woolcraft Fair**, Cummington Fair Grounds visit www.masheepwool.org.
- 🌱 **June 16-20, National Agriculture in the Classroom Conf.**, Louisville, KY. Visit www.agclassroom.org.
- 🌱 **August 14-15, 41th Annual NOFA Summer Conf.**, UMass, Amherst, at www.nofasummerconference.org.
- 🌱 **September 18 - Oct. 4 - Eastern States Exposition** in W. Springfield. at www.thebige.com. MA Day - Sept. 24
- 🌱 **Sept. 29 - Oct. 3, MA Harvest for Schools Week** at www.mass.gov/agr/markets/Farm_to_school/.

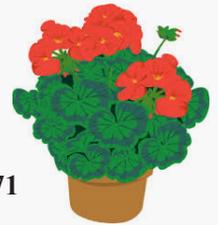
Resources

- 🌱 **MAC's On-Line Lessons, Garden Guides & Garden Blog** at <http://aginclassroom.org/School%20Gardens/SchoolGardens.html>
- 🌱 **The Green Team** - free composting and recycling posters and resources at www.thegreenteam.org.
- 🌱 **Massachusetts Food System Plan** - learn how to get involved at <http://www.mafoodplan.org/>.
- 🌱 **All About Corn** at <http://www.allaboutcorn.umn.edu/> & **Popped Secret** the Mysterious Origins of Corn at https://www.youtube.com/watch?v=mBuYUub_mFXA.
- 🌱 **Pollinator Conservation** information including fact sheets and plant lists at www.xerces.org/pollinator-resource-center.
- 🌱 **Vegetable Crops** recommendations at <http://extension.umass.edu/vegetable/>, and **Soil Testing Lab** at <http://soiltest.umass.edu> and **Four Week Embryology Program** for schools at <http://mass4h.org/programs/embryology>.
- 🌱 **Farm Recipes** from MA Farmer's Markets and a list of local markets at www.massfarmersmarkets.org/FMFM_Main.aspx.

🌱 **2015 Massachusetts Agriculture Calendar Photo Contest.** Now is the time to start taking pictures for the 2015 Massachusetts Agriculture Calendar Photo Contest. Photos must be at least 4" by 6" and no larger than 8" by 10" and must have been taken in Massachusetts in the past three years. Upload photo files of local rural scenes, farm animals, and more on-line at <http://www.massnrc.org/calendar> by June 1. For more information, e-mail questions to Rick LeBlanc at Richard.LeBlanc@state.ma.us. The twelve winners will be featured in the 2016 Massachusetts Agriculture Calendar and posted on MAC's website. For more details and guidelines visit www.mass.gov/agr/.

To receive more information, add a name to our mailing list or give us your comments:

Massachusetts
Agriculture
in the Classroom
P.O. Box 345
Seekonk, MA 02771



508-336-4426
fax: 508-336-0682
E-mail: massaginclassroom@earthlink.net
Website: www.aginclassroom.org

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P.O. Box 345
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