

Agriculture Literacy

Intro to Agriculture

Agriculture, the science of growing plants and raising animals, is important to New York State. About 20% of the state's land area is used by 33,500 farms.

The majority of these farms (98%) are family owned.

Milk is New York's leading agricultural product, ranking the state fifth in the United States for milk production and is the largest producer of yogurt, cottage cheese and sour cream.



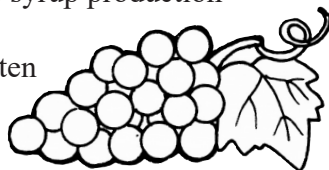
New York ranks second in the nation for our production of apples. Our leading varieties are McIntosh, Empire, Red Delicious and Golden Delicious. Grapes, for juice and wine, place New York third in U.S. production behind California and Washington.

Our state ranks second in maple syrup production behind Vermont.

New York consistently ranks within the top ten for U.S. pumpkin production.

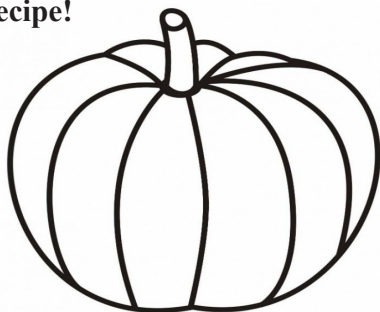


Farmers in New York grow many other crops and raise birds and animals too! Farming isn't just for land in the country.



There is a growing number of farming opportunities in New York's cities. For more about NYS agriculture be sure to read the following features:

- **Two Farming profiles**
- **Three Sisters Garden**
- **An Agriculture Crossword and Word Search**
- **And a Kid-Friendly Pumpkin Recipe!**



Newspaper Activity: Look through the newspaper (print or electronic) for stories, pictures or advertisements that show examples of New York State agriculture.

How many examples did your class find?

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Meet The Hayners

The Hayner farm, started in 1881 by Silas and Elvira Hayner, raised livestock and crops, and included a fertilizer business. The farm has grown and changed over the six generations of farmers. Josh Hayner and his wife Rachel are working to continue the Hayner farming legacy.

Josh took over the operation from his grandfather Harvey in 2019 after graduating from Messiah University, where he studied sustainable agriculture. Sustainable agriculture is farming in a way that is good for the environment, for people, and the economy.

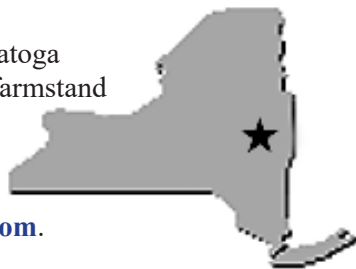
Hayner's largest crop is sweet corn, but they also grow a variety of vegetables and plenty of pumpkins.

Their pumpkins are planted in June in rows that are 10 feet apart with four to five feet between each plant. Pumpkins need plenty of room to grow! All of their crops are harvested by hand. To help with that work, the Hayners hire four to five additional people in the summer season. Each ear of corn is checked for quality before it reaches the farmstand!



Rachel and Josh Hayner standing in front of their sweet corn - one of their most popular crops. Photo provided.

Hayner Farm sits on 65 acres located in Saratoga County on 148 Route 236, Halfmoon, NY 12065. The farmstand is open from July through October. Sweet corn and pumpkins are their main crops but they also grow beans, squash, tomatoes, and more! For info about the Hayner farm go to their website at www.haynerfarm.com.



Fun Facts: Hayner's Ice Cream and Country Store, established in 1996 and owned/run by Craig and Carolyn Hayner, Josh's uncle and aunt, was built on the site of the original farmhouse. For more details of the family farm history go to www.haynersicecream.com/about-us.

The Sport Barn, Hayner Brothers Baseball and Softball Academy was built in 1999 on former farmland. It is owned and run by Josh's dad, Ken and Uncle Norm. For more information see their website at www.haynersportsbarn.com.

Newspaper Activity: Look through the newspaper (print or electronic) for stories, pictures or ads about families. Did you find any examples of families working together? What type(s) of work are they doing?

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Meet The Pawlowskis

Dan and Diane Pawlowski have been growing pumpkins in Great Valley,



The Pawlowski Family. Photo provided.

Cattaraugus County, since they bought Pumpkinville in 1996. They didn't change the name of the farm or its crop. Pumpkinville has been a pumpkin farm since 1968.

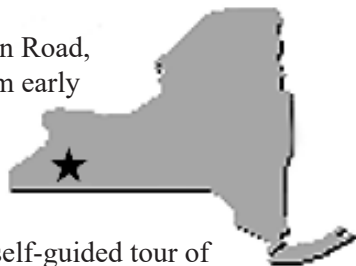
In addition to their 15 acres of pumpkins, the Pawlowskis grow ornamental corn and some hay.

During September and October,

Pumpkinville becomes a family destination. There is something for everyone, including: a Pumpkin express train, farm animals, hayrides, gem mining, pumpkin carving lessons, fresh-baked goods, delicious food and more! They even have a beer garden offering local craft beers for the adults.

The 225-acre farm is a family-run operation with three generations helping out. However, they do hire extra staff during the peak season.

Pumpkinville is located at 4830 Sugartown Road, Great Valley, NY 14741 and is open to the public from early September through Halloween. Visit their website at www.pumpkinville.com.



Fun Fact: Pumpkinville offers a day of fun and learning with group field trips. All tours include self-guided tour of Pumpkinville, a hayride to the pumpkin field, the opportunity to pick your own pumpkin, a cup of freshly made apple cider and a homemade pumpkin donut. Please register your field trip ahead of time at <https://pumpkinville.com/plan-your-visit/field-trips/>.

Newspaper Activity: Look through the newspaper (print or online, past or present) for stories or pictures about land use in your community. Can you find any with ties to agriculture? Did you find any reports involving the availability of fresh fruits and vegetables?

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A Three Sisters Garden

A Three Sisters Garden is a traditional Native American planting of three plants together—corn, beans, and pumpkins (or squash). This way of gardening has been used for hundreds of years because the plants help each other grow.

Each plant or “sister” has a special job. Corn grows tall, providing a natural pole for beans to climb. Beans help the soil by adding nitrogen, a nutrient that makes the soil richer. Pumpkins (or squash) spread out along the ground, covering the soil with large leaves that keep it cool, moist, and help reduce weeds.

This June, consider planting a Three Sisters Garden of your own. Start by finding a sunny area in your garden or backyard where your plants will get plenty of sunlight.

Then follow these steps:

1. Make small hills of soil in your garden.
2. Plant a few corn seeds in the center of each hill.
3. When the corn is about six inches tall, plant a few bean seeds around it.
4. A few weeks later, plant one or two pumpkin seeds at the edge of the hill so their vines can spread across the ground.
5. Water your plants every two to three days if it doesn't rain and pull any weeds that pop up.

As the crops grow, they work together like best friends! The corn gives support, the beans enrich the soil, and the pumpkins protect the roots. This teamwork helps create a healthy garden with less need for fertilizers or pesticides while using less space.

By growing a Three Sisters Garden, you will be following an ancient tradition that connects people to nature and teaches the importance of cooperation in gardening.

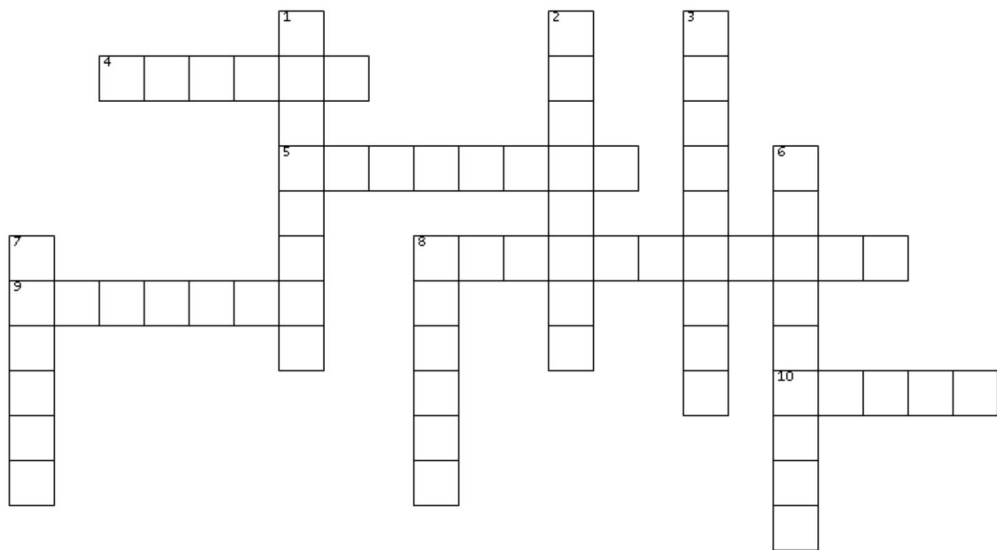
Just like the plants, we grow best when we work together!



Digital and pencil drawing by Anna Juchnowicz.

Newspaper Activity: Look through the newspaper (print or electronic) for stories, pictures or ads about agriculture. Did you find any examples of people growing plants or raising animals or working with nature?

Agriculture Crossword



Use the clues below to fill in the agricultural words.

Across

4. a mass of tiny grains in a seed plant appearing as fine yellow dust
5. giving better flavor to food with spices and herbs
8. cultivation of soil, production of crops, and raising of livestock
9. usually round orange fruit from the gourd family grown from a vine
10. planted seeds for growth esp. by scattering

Down

1. eating and drinking a large amount of good food and beverage
2. a thing someone or something can cling to in order to save or protect themselves
3. making known; displaying; showing plainly
6. provided with food; fed; supported; maintained
7. a young shoot, from seed or root
8. to secure firmly; to hold in place

WORD BANK - Use the following words to solve the crossword puzzle above:

ANCHOR
FEASTING
LIFELINE
NOURISHED
POLLEN

PUMPKIN
REVEALING
SEASONED
SOWED
SPROUT

For more vocabulary lists and puzzles go to www.myvocabulary.com

Agriculture Word Search

A	O	N	D	R	F	O	N	O	T	D	A	P	G
T	T	O	G	E	S	O	I	O	I	U	R	L	E
R	R	U	C	U	O	P	P	U	M	P	K	I	N
I	E	R	A	L	W	S	L	S	P	R	O	U	T
N	V	I	G	I	E	S	T	I	C	I	A	G	L
N	E	S	R	F	D	O	E	G	P	K	U	E	A
S	A	H	I	E	U	E	G	A	R	I	U	N	D
O	L	E	C	L	G	R	P	P	S	N	T	O	V
S	I	D	U	I	V	E	O	I	O	O	R	O	P
P	N	U	L	N	O	G	S	H	S	L	N	S	N
E	G	A	T	E	E	W	I	T	C	A	L	E	P
P	N	E	U	O	N	O	R	U	E	N	N	E	D
H	P	O	R	G	R	U	A	E	C	I	A	O	N
A	U	F	E	A	S	T	I	N	G	N	V	N	N

Find and circle the agricultural words listed below:

AGRICULTURE
ANCHOR
FEASTING
LIFELINE

NOURISHED
POLLEN
PUMPKIN
REVEALING

SEASONED
SOWED
SPROUT

Newspaper Activity: Select a story from the newspaper (print or electronic) that is interesting to your class. Use the important words from the story to make a new word search or crossword puzzle. Give yourselves extra credit if the story has any connection to New York state agriculture.

For more about NYS agriculture go to newyork/agclassroom.org

Pumpkin Apple Cider Smoothie

“The Pie That Molly Grew” has a great pumpkin pie recipe in the back of the book. But if you’d like to try a pumpkin recipe at home without using the stove, make this one from www.applesfromny.com.



Ingredients:

- 1 large NY apple, cored and chopped
- 1-2 Tbsps apple cider vinegar
- 1 tsp pumpkin spice, (or equal parts cinnamon, nutmeg, and ginger)
- 1/2 cup pumpkin puree
- 1 Tbsp pumpkin seeds
- 1 tsp maple syrup
- 1 cup of ice cubes

Instructions:

1. Combine in a blender; blend until smooth.
2. Pore into a chill glasses, serve and enjoy!

For more recipes visit your local farmers market or farm stands. Many farmers are willing to share recipes with their customers.

Newspaper Activity: Look through the local newspaper (print or online) and other sources for recipes that use fruit or vegetables, especially pumpkins.

Including several daily servings of vegetables & fruits as part of an overall healthy diet may lower the risk for heart disease and certain types of cancer.

Source: www.choosemyplate.gov