4-H 1279

HERITAGE GARDENING

4-H Youth Programs • MSU Extension & The Folk Arts Division • The MSU Museum
Michigan State University

CONTENTS

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Preface

This bulletin was written for 4-H members and leaders who are particularly interested in horticulture, FOLKPATTERNS, foods and nutrition, and photography projects.

The goals of a Heritage Gardening—Vegetables project are to:

- Develop an awareness of our plant heritage by the cultivation of heritage vegetable varieties
- Introduce gardening folklore information as it pertains to vegetable gardening
- Promote and stimulate interest in preserving heritage vegetable varieties
- Introduce heritage gardening as a topic for exploration in 4-H projects and activities

4-H Heritage Gardening projects will give youth and leaders the experiences to:

- Identify heritage vegetable varieties cultivated by early settlers
- Describe heritage gardening methods and tools
- Develop skills and attitudes to collect and interpret oral and visual history materials

Through your Heritage Gardening project, you should contact people in your community with gardening experience. They may be family members, relatives, neighbors, or older adults. If you need to get in touch with persons with lifetime gardening experiences or "grassroots gardeners," contact your local county agency on aging. If you need further information or addresses, contact the Michigan Office of Services to Aging, P.O. Box 30026, Lansing, MI 48909.

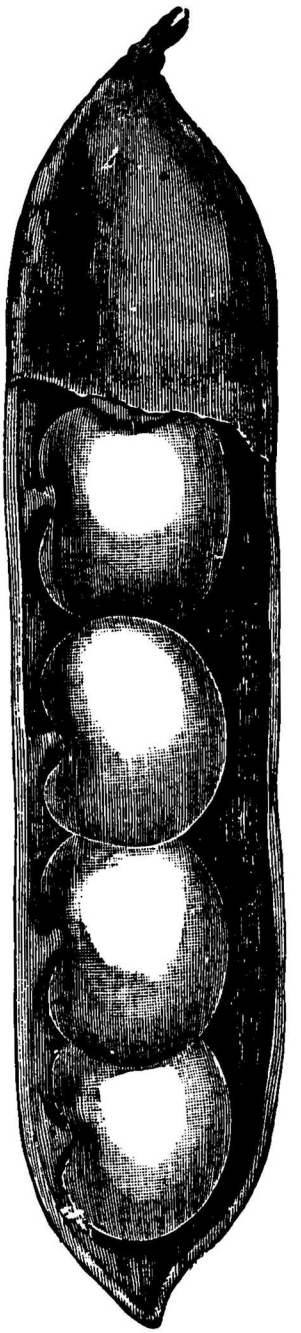
The various activities in this bulletin will refer to 4-H FOLKPATTERNS projects. Techniques for information gathering, taping, interviewing, making short-item cards, photography, etc., are all explained in 4-H 1506, *FOLKPATTERNS 4-H Leader's Guide.* Interviewing local community gardeners will provide a source of information that may be specific to your geographic area. Information can be gathered that will assist in comparing personal or community traditions while developing an awareness with community members in 4-H projects. You will be learning unwritten history. We hope you can identify where this knowledge can be found, how to record it, and how to pass it on to others. For more information, contact the Folk Arts Division, Michigan State University, East Lansing, MI 48824.

This bulletin does not contain cultural information on each vegetable variety. Please refer to other Extension bulletins (for example, E-529, *Home Vegetable Garden,* and E-824, *Family Vegetable Garden Series*) for information on planting dates, spacing, days to maturity, etc. Contact your county Cooperative Extension Service office for more information.

The information in this bulletin is arranged following the seasonal calendar year, from catalog ordering in the winter to the fall harvest. At the end of the bulletin is a section on heritage gardening activities. You may wish to refer to these throughout the year for additional ideas to enrich your project.

Many of the folklore and history projects described in this bulletin would work very well for the Young America Garden or Experimental Horticulture contests. These contests are sponsored by the National Junior Horticulture Association (NJHA) and are open to youth 8 years of age (or younger if able to print) through 21 years of age. Write to the following address for more information: NJHA, 441 East Pine Street, Fremont, MI 49412.

Happy heritage gardening!



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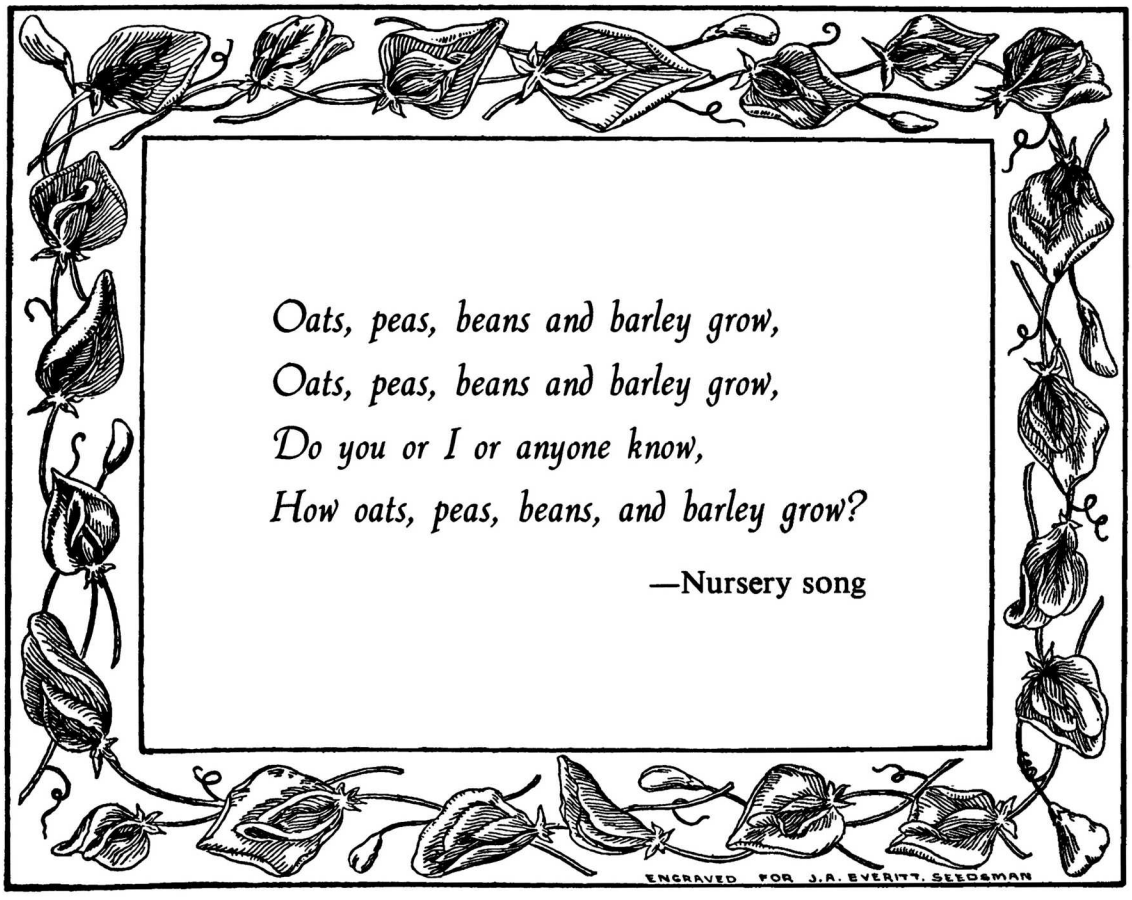
- *The picture of Johnny Appleseed on page 4 is from* Johnny Appleseed: Man & Myth, *by Robert Price, Indiana University Press, copyright 1954.*
- *The picture of Liberty Hyde Bailey on page 5 is from the Michigan State University Archives & Historical Collections.*
- *The Heirloom Vegetable Garden plan on page 20 is adapted from* Vegetable Crops *by Robert Becker and Roger A. Kline, College of Agriculture and Life Sciences, Cornell University, Ithaca, New York.*
- *The Indian garden plan on page 29 was developed by the Dickson Mounds Museum in Lewiston, Illinois.*

Introduction



Ever since human beings appeared on this earth, knowing how to grow plants has become one of their most important activities. From large fields to small herb gardens, the cultivated garden has provided people with a source of food.

Although not everyone has to plant a garden for food today, vegetable gardening continues to be popular. Growing your own vegetables can help improve your diet, give you exercise and enjoyment, and save you money.

The first settlers in this country grew seeds they brought with them from their homelands, as well as those they obtained from North American Indians. Also, in the early days, gardeners had to save their own seeds for planting the next year. Young people learned which plants to grow and how to grow them by watching or helping their family or neighbors. They certainly didn't go to school to learn how to plant potatoes. However, from the time of this country's first European settlers until today, gardening in America has changed dramatically. The growth of the seed industry, improvements in plant varieties, and increased knowledge about gardening techniques have changed the look of gardens and the way they are planted.

How Our Seeds Got Here

There were no farms or permanent gardens when the first settlers arrived. Forests covered most of the Atlantic coast. Most of our cultivated flowers, vegetables, and fruits came here from other nations. A walk through your garden is really a walk around the world.

Christopher Columbus first introduced new food plants from other parts of the world to America. Queen Isabella, who financed his trip, also directed that he bring back to Spain any new plants he might discover. He brought back corn, potatoes, squash, tobacco, pumpkins, beans, grains, and fruits. These plants were guarded as though they were gold. We celebrate Columbus Day (October 12) each year; for those who love plants, it is a very special day.

At the beginning of the 17th century, French explorer Samuel De Champlain was starting a colony in Canada on the St. Lawrence River. At almost the same time, the English were founding the Jamestown Colony in Virginia. The Pilgrims arrived in Massachusetts in 1620, and from then on immigrants by the hundreds and thousands came to America. They brought their dreams and their seeds. In later centuries they arrived at Ellis Island in New York City with seeds in their pockets and sewn into their clothing and the linings of suitcases.

These brand new Americans brought their seeds of life to start anew in a strange land. They planted these seeds, harvested their crops, and saved some seeds for the next growing season. But future generations generally lost touch with saving seeds. Seeds could be cheaply purchased in packages—and many old varieties died out.

What Is an Heirloom Vegetable?

The term "heritage" describes traditions that are handed down by one's ancestors. An "heirloom" is a possession passed down from one generation to another.

An heirloom vegetable is usually a variety that was introduced and grown before 1900. Many of these varieties are no longer sold by seed companies. Some are kept alive by families who pass them on from one generation to another.

There are tens of thousands of edible plant species in the world, but only about 150 species have been cultivated. The world depends on only about 20 crop species for 90 percent of its food. Each year fewer and fewer varieties are grown. People will store unused spinning wheels and horse-drawn plows in barns and attics, but seeds have to be grown and saved to survive.

Scientists have been very concerned about this. There is more and more interest in saving heirloom seeds. Each variety carries certain genes or characteristics that make it different from other varieties. It's these differences that need to be saved. If there was a change in climate or a disease epidemic, these different varieties with their special genes could be used to develop new, more resistant varieties.

In the 1830's and 1840's, the Irish grew only one variety of potato. This variety was not resistant to a fungus and the entire crop was destroyed. During the potato blight, 2 million people starved and another 2 million people were forced to leave Ireland.

As our plant varieties shrink or become extinct, the pool of plant genes shrinks. Early farmers planted many varieties. Thomas Jefferson grew 250 varieties of vegetables and said, "The greatest service which can be rendered any country is to add a useful plant to its culture."

Folklore & Modern Science

Ever since people began to till the soil, they have looked for favorable signs in the stars, moon, and plants to guide them in planting and harvesting crops. Through the centuries, every culture has built a legacy of gardening and farming "rules." Some of these are recorded in books but most are passed on verbally from parent to child.

"Plant corn when apple leaves are as big as a mouse's ears."

"Plant root vegetables in the dark of the moon; plant others in the light of the moon."

Some of these sayings are based on people not knowing the facts. Other are based on true observations.

The early peoples believed in anything they thought might make crops produce more. Peppers were supposed to grow better if a red-haired man planted them. Corn planted by a pregnant woman was supposed to grow better.

The moon was very often involved in planting folklore:

"Plant round seeds in the full of the moon, flat or long seeds in the old moon."

"Anything that grows into a head (cabbage, cauliflower, lettuce) should be planted in a full moon so that it will grow big and round."

Johnny Appleseed

One scientist studied the rhythms of potatoes for several years. Even when these plants were grown at constant conditions (same light and temperature), he found that they had "knowledge" and responded to outside influences such as the time of day, the position of the sun, the position of the moon, and even the time of the year. By measuring the rate of oxygen used, he found that the potato showed a lunar monthly rhythm.

There are many sayings that link the planting of a crop with a stage of growth of a local tree or shrub:

"When pin cherry leaves are as big as a squirrel's ears, put in your garden and have no fears."

"Plant _____
—when the shadbush (June berry) is in bloom.
—when apple blossoms drop.
—when hickory leaves are as big as a crow's feet.
—when cherry trees are in bloom."

Scientists agree these recommendations are usually correct. Each of them reflects the coming of spring, the gradual warming of the soil, and the longer days. The sayings helped to protect less experienced gardeners from planting crops too early, when seeds or plants would likely be frosted or decay in cold soils.

Folklore has played an important role in people's efforts to feed themselves. Some lore was based on fears of evil spirits and the unknown. Much of this was discarded as people learned more. But other bits of lore originated from wise observations of smart men and women. These beliefs lasted until modern times when they were confirmed and refined by science.

Johnny Appleseed

Part of our gardening folklore is the legendary early pioneer seedsman, Johnny Appleseed, who used to carry seeds in a sack as he traveled. His real name was John Chapman, but he was better known as Johnny Appleseed. He was born in Massachusetts in 1774, and he spent his life walking along the dirt roads of Pennsylvania, Ohio, Northern Indiana, and Southern Michigan giving apple seeds to the early settlers. These settlers had come from the east by wagon to settle in the Midwest. They had brought only their most important possessions and furniture, and had built log cabins for their families when they arrived. There wasn't room to carry fruit trees with them in their wagons.

Johnny Appleseed would give apple seeds to the settlers and show them how to plant the seeds and care for the seedlings. On later visits he would check to see how the seedlings were growing. He showed the

settlers how to transplant, prune, and care for the young trees.

Johnny was always welcome on his visits because the settlers lived far apart and had few visitors. Most travelers in those days were lawyers, ministers, and doctors. Newspapers were scarce and many of the people couldn't read anyway—so Johnny spread the news as he traveled.

Johnny Appleseed died in Indiana in 1845 when he was 70 years old.

Liberty Hyde Bailey

Liberty Hyde Bailey was born in South Haven, Michigan, on March 15, 1858. As a young boy, he was fond of all living things. His home was full of his plant and animal collections. At an early age he learned to care for the family garden and graft fruit trees on his father's farm. At age 14 he read an essay entitled, "Birds," at the Michigan State Pomological Society meeting (a society of people interested in the study of fruit and fruit growing). He was the youngest person to read an essay in the organization's history.

In 1877, Bailey went to Michigan Agricultural College (now known as Michigan State University) in East Lansing to study botany and horticulture with Professor William Beal. He excelled in studies of plants. During one winter term, he taught in a nearby one-room schoolhouse called the Carl School. During recess and on Saturdays he taught nature study to students. After graduating from college, Bailey went on to study botany at Harvard University.

Bailey had a life plan: 25 years for learning, 25 years for service or the practice of a job, and 25 years doing what interested him most.

In 1885, Professor Beal asked Bailey to return to Michigan Agricultural College (MAC) to become chairperson of what was to become the first Horticulture Department in the United States. While on the faculty, he designed the first Horticulture Laboratory called Eustace Hall. Bailey left MAC to go to Cornell University in New York where he served as Horticulture Department Chairman, and later as Dean of the College of Agriculture.

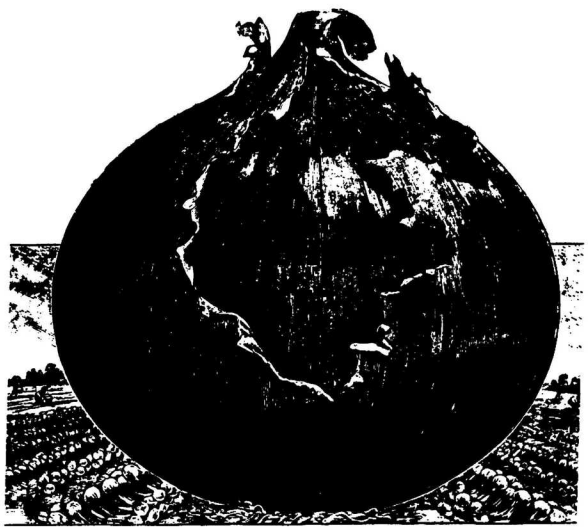
During his long life (he lived to be 96), Bailey wrote over 700 papers and 95 books, including encyclopedias. He became a world-renowned scientist and the most prolific horticulture writer in history. Even though he was a famous scientist, world traveler, editor, administrator, philosopher, and author, he was always interested in writing nature study leaflets for young people. His main objective was "to open the child's mind by direct observation to a knowledge and love of the common things and experiences in his environment."

Bailey received the first public funding to initiate a program for children incorporating "learning by doing" activities. These clubs became known as Boys and Girls Clubs; later they were called 4-H Youth Programs.

"I dropped a seed into the earth. It grew, and the plant was mine."

From: *A Plant at School*, 1903
L. H. Bailey

Liberty Hyde Bailey



I went to the garden and
got it,
Came to the house and cried
with it.
An onion.

Gardens—Old vs. New

An Indian village

The Early Garden

The early garden was usually located near the house, and everyone in the family helped with it. Unlike today, when we can buy frozen or canned vegetables, most vegetables grown in the 1800's were meant for storage. They were either pickled, dried, or preserved in root cellars.

If you lived in the old days, you might not recognize the vegetables. For example, there was a radish that was black and the size of a turnip. Some lettuce had loose heads and frilly leaves, some carrots were yellow, and beans had strings. You would not have eaten tomatoes in the early 1800's, since they were grown only for ornament.

Today many gardeners grow heirloom varieties because they feel they are better than modern varieties. Modern breeders work hard to produce vegetables that will ripen at the same time so they all can be harvested at one picking in the same day. They also strive to produce vegetables that will have tough skins that won't bruise in shipping or that will be all the same size for a processor.

Some heirloom varieties are not disease resistant, don't produce high yields, and may not have a great flavor. Then why grow them? Because it will take us on a journey through time to give us a better idea of how our ancestors lived 100 years ago. It gives us a sense of roots.

"No occupation is so delightful to me as the culture of the earth, and no culture comparable to that of a garden."

—Thomas Jefferson

The Modern Garden

Modern gardening can be an exciting activity to participate in as well as an interesting topic to study. Many people grow vegetable gardens today for a variety of reasons: to make extra income, to fill leisure time, to grow favorite foods not available in local markets, to enjoy fresh or organically grown vegetables, or simply to provide food for the household. Gardening is done in all kinds of locations—from garden plots near summer kitchens of farmhouses (a kitchen located in a wing attached to the house) to rooftop greenhouses to community-shared plots. People garden wherever they have the space and sunlight to grow things.

Even though 150 plant species are now cultivated, a gardener usually only grows a few species. What a gardener chooses to grow will depend on what seeds are available and the kind of climate and soil conditions.

Family traditions, regional traditions, and personal likes or dislikes of vegetables will also affect what is grown in a garden. New immigrants to this country, such as the Indochinese from Southeast Asia or Eastern Europeans, continue to bring seeds and foods they prefer with them, thus introducing new vegetables to communities.

New gardening techniques and tools also continue to change the way people garden. New methods are constantly added to the old.

Seeds—A Wondrous Package

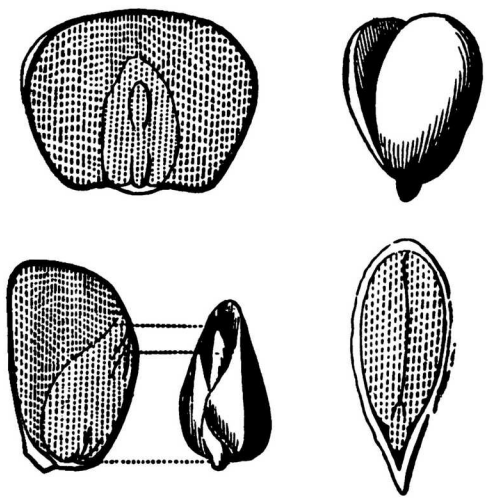
A plant seed is really a very young plant which has not yet begun to grow actively but is very much alive. Seeds come in many different sizes, shapes, and colors. Some are so small, like orchid seeds, that you need a magnifier to see them. Some are very large like the coconut.

A seed held in the hand feels dry and hard. Since it is not growing we say it is dormant or inactive. When the embryo inside a seed starts to grow actively, we say that the seed germinates or sprouts.

A seed will germinate when the conditions outside it are just right:

—When there is enough moisture
—When there is enough oxygen in the soil
—When the temperature is warm enough

The stored food inside a seed is an important source of food for people. Instead of being used by the plant embryo for germination, this food is eaten by people and animals. For example, we eat peas and beans for dinner. We feed wheat, oats, and corn to animals, and we also eat them ourselves in bread and breakfast cereals.



How Seeds Are Formed

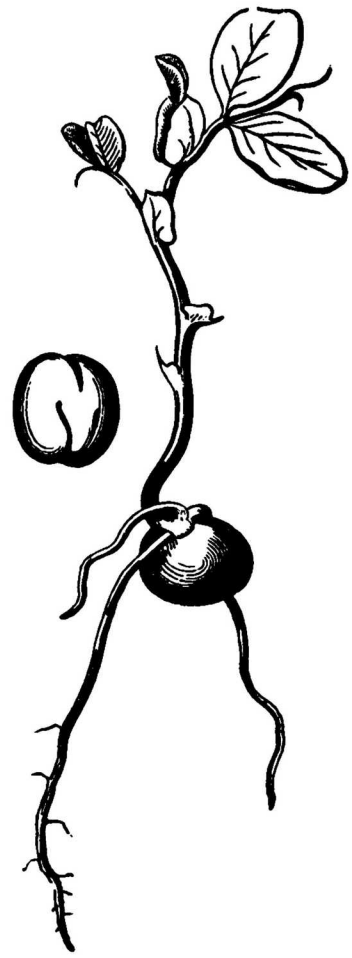
Seeds are formed in fruits which develop from ovaries in a flower. Flowers are reproductive organs each usually containing colorful petals, protective sepals, stamens, and a pistil.

The stamens are the male part of the flower; they produce pollen grains which contain male sex cells. The pistil is the female part and contains the ovules inside the protective ovary. The ovules contain the female sex cells.

When the pollen grain lands on the top of the sticky pistil, it starts to grow a hairlike tube. The tube grows down through the pistil into the ovary and into an ovule. Then the pollen tube discharges male sex cells into the ovule and one male sex cell unites with the female sex cell. This is called fertilization. The ovule begins to grow and develops into a seed within the ovary (fruit). Seeds remain inside the fruit and are protected by it until the fruit matures. Then the seeds may separate from the fruit (for example, bean and pea seeds).

The purpose of the plant has now been completed. It has provided seeds for a new generation of plants just like the plant that made it.

In most plants, stamens and pistils are in the same flower. When pollen from a stamen can fertilize the ovules of a pistil in the same flower, it is called self-pollination (for example, tomatoes, beans, and peas). Cross-pollination is necessary when plants are self-sterile (pollen can't fertilize ovules in the same flower). In this case, pollen must come from a different flower either on the same plant or a different plant of the same species (for example, cabbage).



Pea germination

You'll have good luck all year if you eat peas on New Year's Day.