

CONTENTS



This bulletin was written by Jane L. Taylor, Curator, 4-H Children's Garden, 4-H Youth Programs, and J. Lee Taylor, Professor Emeritus, Department of Horticulture, Michigan State University. Design is by Marian Reiter, 4-H Graphic Artist. This bulletin was edited by Janet R. Olsen, 4-H Publications Editor.



In 1985, the 4-H Heritage Gardening project was awarded a Certificate of Commendation from the American Association for State and Local History.

	Page		Page
Preface	1	S.O.S. (Save Our Seeds)	31
Introduction	2	Collecting, Extracting, and Storing Seeds . . .	31
How Our Seeds Got Here	3	Seed Longevity	31
What Is an Heirloom Vegetable?	3	Share Your Findings	32
Folklore & Modern Science	4	Activities	32
Johnny Appleseed	4	Garden Lore	33
Liberty Hyde Bailey	5	Activities	33
Gardens—Old vs. New	6	The Harvest	34
The Early Garden	6	Reaping the Rewards	34
The Modern Garden	6	From Garden to Gullet	35
Seeds—A Wondrous Package	7	Come to the Fair	37
How Seeds Are Formed	7	How It All Began	37
Know Your Plants	8	Fairs Are Fun	37
Parts of the Plants You Eat	8	Heirloom Vegetable Classes	38
How Plants Get Their Names	8	Heritage Garden Project Entry Form	39
A Heritage Gardening Year	9	Activities	40
Ordering Catalogs & Seeds	10	More Heritage Gardening Activities	41
Getting Started	10	Animal or Vegetable?	41
Seed Catalogs	10	Bountiful Bean Teepee	41
Ordering Seeds	11	Braiding Onions	41
Heirloom Crops	12	Calligraphy Cress	41
The Heritage Vegetable Garden	20	Cozy Cukes	42
Suggested Garden Layout	20	Gorgeous Gourds	42
Planting Your Vegetables	21	Monogrammed Pumpkins	42
Moon Planting	21	Plant Prints on Fabric	42
Companion Planting	22	Potato and Onion Prints	43
Protecting Your Plants	24	Pumpkin People	43
An Indian Garden	27	Seed Medallions	44
Vegetables to Grow	28	Seed Necklaces	44
Activities	29	Sun Prints	44
		References	45

ACKNOWLEDGMENT

Special appreciation is extended to the members of the 1982-83 State 4-H Horticulture Developmental Committee for reviewing and piloting this bulletin:

Earl Threadgould (Chairperson)	4-H Youth Agent, Ingham County
Theresa Dow Silm	4-H Youth Agent, Clinton County
Cliff Trudell	Volunteer, Marquette County
Frank Kapp	4-H Youth Agent, Ogemaw County
Roberta Lawrence	Horticulture Agent, Washtenaw County
Loretta Curtis	4-H Program Assistant, Wayne County
Meg Siegl	Horticulture Instructor, MSU
Denise Cerny	Volunteer, Clinton County
Wallace Ribbron	Volunteer, Wayne County
David Houseman	Program Manager, Food Delivery Systems, Michigan Office of Services to the Aging
Jim Korienek	Teen Volunteer, Clinton County
J. Lee Taylor	Extension Specialist, MSU
Rhonda Walker-Buckingham	4-H Program Leader, MSU

Additional assistance was also provided by Martha Brownscombe, Director, 4-H FOLKPATTERNS project; Marsha MacDowell, Curator, Folk Arts Division, The Museum, Michigan State University; and Yvonne Lockwood, State Folklife Specialist, The Museum, Michigan State University.

Funding for this project was provided by a Youth Projects grant from the National Endowment for the Humanities and by the Michigan 4-H Youth Programs.

Know Your Plants

Parts of Plants You Eat

Plants have four major parts—roots, stems, leaves, and flowers. If pollinated, flowers may produce fruits which contain one or more seeds.

We use different parts of different plants as food. We eat the fruit of the cucumber plant, the bud of a cabbage, the root of a carrot. Here is a list of some plant parts that we eat. You may discover more on your own as you eat dinner during the next week.

Roots—beet, turnip, sweet potato

Stems—white potato, kohlrabi

Leaves—lettuce, spinach, chard

Leaf stalk—celery, rhubarb

Fruits—tomato, snap bean, snap pea,
sweet corn kernel (one-seeded fruit)

Seeds—lima bean, pea, peanut

Young flower buds and stems—broccoli,
cauliflower

Buds—cabbage, Brussels sprout

How Plants Get Their Names

Many catalogs and seed packets use the scientific name of plants. People have always wanted to try to arrange things in an orderly manner. Even Noah grouped his animals into orderly pairs for their voyage on the Ark.

If we didn't use scientific names with all the many plant species in the world, the result would be disastrous. The system scientists use is accepted all over the world. This helps to keep things straight and less confusing. Plants are grouped according to how they are related.

Each plant has a Latin name made up of two parts: the genus or generic name and the species or specific name. The cultivar is the cultivated variety.

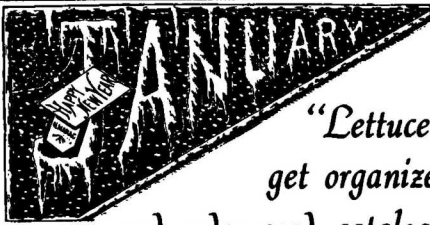
The family tree below shows the "Plant Kingdom."

Division	Spermatophyta (Seed-bearing plants)
Class	Angiospermae (Flowering plants)
Subclass	Dicotyledonae (2 embryonic leaves)
Order	Rosales
Family	Leguminosae (Pea family)
Genus	<i>Phaseolus</i> (Bean)
Species	<i>vulgaris</i> (common)

Cultivar Kentucky Wonder

The scientific name for the plant above is *Phaseolus vulgaris* 'Kentucky Wonder.' Common names for other beans in this species include: pole bean, green bean, snap bean, common bean, runner bean, string bean, and wax bean. This cultivar is known as Kentucky Wonder pole green bean. If you have a bean seed that is an heirloom and has been in your family for generations, it may be known by its cultivar name 'Jack's Best Bean.'





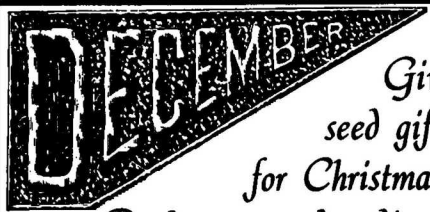
*"Lettuce"
get organized
and order seed catalogs.*



*Order seeds.
Plan ahead.*



*Get tools
ready. Start
some plants indoors.*



*Give
seed gifts
for Christmas.
Read your garden diary.
Begin 4-H Awards reports.*



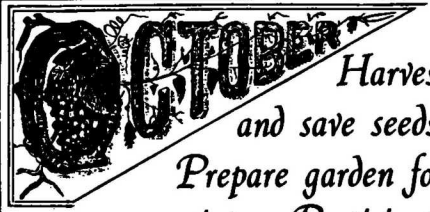
*Learn
about moon
planting. Plant
early crops. Start
your diary.*



*Harvest
late seeds.
Make Christmas gifts.*



*Learn
about companion
planting. Plant later
crops.*



*Harvest
and save seeds.
Prepare garden for
winter. Participate
in harvest festival!*



*Make a
scarecrow.
Plant Indian garden.*



*Write
horticulture
contest reports.
Continue harvest.*



*Prepare
exhibits. Go
on a garden tour.
Continue harvesting.*



*Harvest
early crops.
Start exhibits for
fairs, shows, etc.*

Ordering Catalogs & Seeds



Getting Started

Order your bulletins from your county Cooperative Extension Service office. Each member should have a copy of E-529, *Home Vegetable Garden*. The leader should have a copy of 4-H 1506, *FOLKPATTERNS 4-H Leader's Guide*.

The following bulletin is very helpful for the historical information on the heirloom vegetables that will be grown: *The Heirloom Vegetable Garden*, Cornell Cooperative Extension Information Bulletin 177, 4-H Leader's Guide L-10-13. You can order this bulletin from Distribution Center C, 7 Research Park, Cornell University, Ithaca, NY 14850. The cost is \$3 per copy; one per leader would be very helpful.

Seed Catalogs

In the early days of our country, some of the settlers used seeds they had saved from year to year. But most seeds were imported from Europe, especially England.

The first commercial seedsman in the U.S. was David Landreth. He began business in Philadelphia in 1784. Among his customers were George Washington and Thomas Jefferson. Landreth Seed Company is still in business today. In 1789, the Shakers, a religious group of New York, started the first commercial seed nursery in the United States. The Shakers packaged their seeds in small paper packets called "papers." We can thank the Shakers for the brightly colored seed packets we see in stores today.

The first mail-order seed catalog was introduced in 1834. These early catalogs were filled with detailed line etchings. Some of these were used to illustrate this bulletin.

Millions of seed catalogs are printed each year by larger seed companies. These catalogs are the most widely read garden books in the world. They are also some of America's best bargains. Most are usually free. They contain beautiful pictures and

descriptions of varieties and how-to-do-it information.

You will need to order many seed catalogs to obtain the heirloom varieties you want. Unless otherwise noted, these catalogs are FREE. Catalogs marked with an asterisk (*) specialize in heirloom varieties.

W. Atlee Burpee Co.
Warminster, PA 18974

The Cook's Garden
P.O. Box 535
Londonderry, VT 05148

Gurney Seed & Nursery Co.
Yankton, SD 57079

***J.L. Hudson, Seedsman**
P.O. Box 1058
Redwood City, CA 94064
(\$1 per catalog)

***The Thomas Jefferson Center for Historic Plants**
Monticello
P.O. Box 318
Charlottesville, VA 22902

***Johnny's Selected Seeds**
Albion, ME 04910

Kids in Bloom
P.O. Box 344
Zionsville, IN 46077

Let's Get Growing
1900 Commercial Way
Santa Cruz, CA 95065

Museum Gift Shop (Heirloom Gardening Catalog)
Old Sturbridge Village
Sturbridge, MA 01566

Pinetree Garden Seeds
Box 300
New Gloucester, ME 04260

***Seeds Blum**
Idaho City, State
Boise, ID 83706
(\$3 per catalog)

Seeds of Change
P.O. Box 15700
Santa Fe, NM 87506

Shepherd's Garden Seeds
30 Irene St.
Torrington, CT 06790

***Southern Exposure Seed Exchange**
P.O. Box 158
North Garden, VA 22959
(\$3 per catalog)

Stokes Seeds Inc.
P.O. Box 548
Buffalo, NY 14240

188
CATALOGUE OF
GARDEN SEEDS,
RAISED AND SOLD
BY THE
UNITED SOCIETY,
Pittsfield, Berkshire Co., Mass.

Page	Clear
EARLY PITTSFIELD PRAS...	6
Large White Marrowfat do...	6
Green Dwarf Marrowfat do...	6
Strawberry do...	6
Berkshire Dwarf Beans...	6
Early Bush do...	6
Red Cranberry do...	6
Mangel Wurzel Beet...	6
Blood do...	6
Turnip Blood do...	6
Orange do...	6
Turnip do...	6
Red do...	6
White do...	6
Sugar do...	6
Scarcity do...	6
Yellow Onion...	6
White do...	6
Red do...	6
Long White Parsnip...	6
Guernsey do...	6
Salsify do...	6
Orange Carrot...	6
English Tankard Turnip...	6
English do...	6
Yellow Swedish do...	6
White Swedish do...	6
French do...	6
Scarlet Turnip Radish...	6
Scarlet do...	6
Salmon do...	6
Yellow do...	6
Black Spanish do...	6
Squash Pepper...	6
Cayenne do...	6
Asparagus...	6

Papers, at 6 cts.....

Shaker seed catalog

Activities

1. Order your catalogs. Save them from this heritage project. Years from now it will be fun to look through them and compare varieties. You will need to order many catalogs to obtain the heirloom varieties you wish to grow since no one catalog has them all.
2. Interview friends and relatives to see if they have old catalogs to share with you. Some of these dating back to the 1800's are very interesting. W. Atlee Burpee Company has a reproduction catalog from 1888. Check your library for a copy.
3. Interview persons who save their own seeds from year to year. Find out which country the seeds or person originated from. How long have they been growing them? Why do they keep growing them? Do they grow them for a sentimental reason or for use in making a favorite food dish? Are there stories associated with these seeds? Write this information down. Refer to 4-H 1506, *FOLK PATTERNS 4-H Leader's Guide*, for information on interviewing techniques and making short-item cards. See if your friends will share some of their heirloom seeds with you. Grow them!
4. You may want to conduct an experiment by planting an heirloom variety and an All-America selection. Be sure to keep records of their growth, resistance to disease, ripening time, how much they produce, and how they taste. Keep this information for a report.



Ordering Seeds

Examine the list of heirloom vegetables (pages 12-17) and list those you would like to plant.* Order those seeds. You may save money if several people place orders together.

Be sure to save the packets the seeds come in. They will provide much of the information you need for planting and growing. You also might later use the seed packets in a display or a report.

If you are interested in locating heirloom vegetable varieties—those included in this bulletin and others you may have heard of—a good reference is *The Complete Vegetable Gardener's Sourcebook*, by Duane and Karen Newcomb. This reference lists all vegetable varieties that are sold by seed companies.

The Thomas Jefferson Center for Historic Plants catalog includes a few vegetables and many flower varieties. The catalog includes items of historic plant interest, and if you pay a visit to the Center at Monticello during the growing season, you can buy live plants.

The Seed Savers Exchange sells heirloom seeds to members; write to them for more information: Rural Route 3, Box 239, Decorah, IA 52101.

*If you are planning on planting a North American Indian garden, check that activity section (pages 27-30) for additional varieties that you may wish to order.





BEANS

*Dwarf Horticultural or Speckled
Cranberry
Jacobs Cattle
Scarlet Runner*

Beans were grown by the Indians in North and South America long before the European settlers arrived. The early explorers found the Indians using beans as a staple in their diets along with corn. Christopher Columbus discovered a field of bean plants upon his arrival. Children in the Massachusetts Colony ate so many beans they adapted an old English verse which referred to "Pease Porridge":

*"Bean porridge hot, bean porridge
cold,
Bean porridge in the pot, nine days
old."*



BEETS

*Early Blood Turnip
Egyptian
Long Season or Winter Keeper*

Beets are related to Swiss chard and sugar beets. They originated in Europe, North Africa, and the Near East. The Germans first used the red beets in the 1500's. Early settlers brought them to America.

The varieties that follow are actual varieties that were grown regularly in 19th century gardens and that are still in use today.

The list of vegetable varieties is taken from *The Heirloom Vegetable Garden*, Cornell Cooperative Extension Bulletin 177, 4-H Leader's Guide L-10-13, by Roger A. Kline, Robert F. Becker, and Lynn Belluscio.



CABBAGE

Drumhead Savoy
Early Jersey Wakefield
Late Flat Dutch

The loose-headed cabbage originated in the Mediterranean. The hard-headed forms were developed in the cooler parts of Europe, Germany, and Denmark. Jacques Cartier, an early French explorer, introduced cabbages to America. In 1541 he planted some in Canada. The Indians adapted it for their own use as did the early colonists.



CARROTS

Early Horn or Early Scarlet Horn
Long Orange or Improved Long Orange

Carrots of many shapes, sizes, and colors were grown in Europe in the 1500's. They originated in parts of Asia. The settlers in Jamestown, Virginia, in 1609 were reported to have grown carrots. The Pilgrims in Massachusetts also grew this vegetable.



CORN

Black Mexican or Black Sweet
Stowell's Evergreen

Corn or maize, as the Indians called it, originated in the Andes of Peru. Corn supported the early civilizations of the Americas. Fossils show that corn was grown in North America more than 4,000 years ago. Following the discovery of America, corn spread rapidly throughout the world.

Sweet corn is of more recent origin; it did not become important until the early 1800's. Until that time most people ate young field corn. Historically corn is one of our most important food plants.



CRESS

Curled or Peppergrass

A native of western Asia, cress has been cultivated in England since the 16th century. It was brought to this country by the early settlers. It is used today by English school children who grow it on their windowsills. During recess it is put on buttered crackers. Americans use it for a garnish or for sprouts.



CUCUMBER

Long Green or Improved Long Green

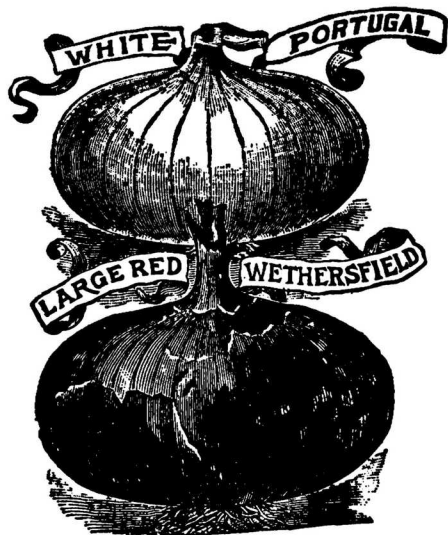
India shared cucumbers with the world, and Columbus brought cucumbers to the New World. They were grown by the first settlers at Jamestown, Virginia, and Plymouth, Massachusetts.



LETTUCE

*Green Boston (Green Tennis Ball)
Paris White Cos*

Our most popular salad plant originated in the Near East. It was popular with the Persian kings and Romans. Seeds were brought to the New World by Columbus. Lettuce was no doubt among the first garden seeds sown in every European colony in this country.



ONION

*Red Wethersfield
Southport Yellow Globe
White Portugal or White
Silverskin*

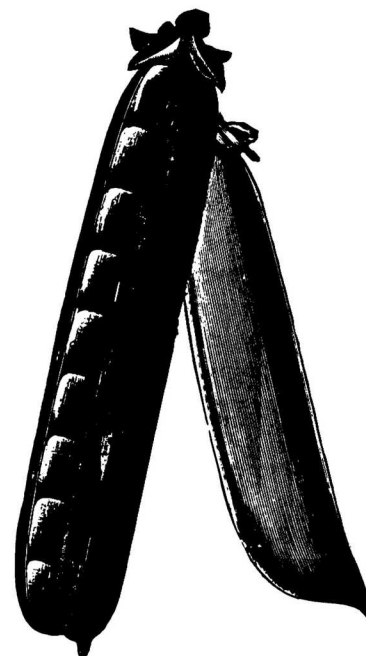
Our common onion originated in middle Asia. Onions were cultivated as food from the earliest period of recorded history. They were eaten by the laborers constructing the giant pyramids of Egypt and by Roman soldiers. The Spanish introduced the onion to the West Indies; from there it soon spread to all parts of the Americas.



PARSNIPS

Hollow Crown

Parsnips and carrots are closely related. Parsnips originally came from the eastern Mediterranean regions. Their use spread to Europe where they became a common vegetable. The English colonists at Jamestown, Virginia, and the Massachusetts colonists grew parsnips.



PEAS

*Alaska
Alderman
Dwarf Sugar*

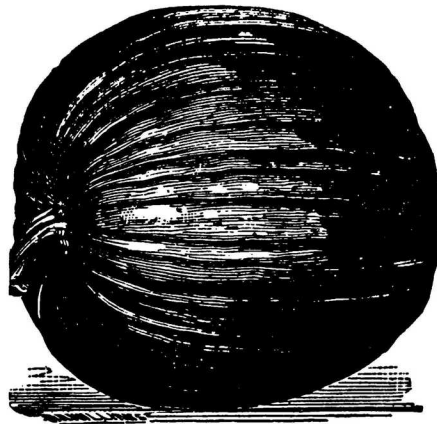
Originally from middle Asia and the Near East, peas were first grown for their dry seeds. After the 16th century, the use of green peas was recorded in France. The edible pod was also known then. The English developed many fine varieties. Peas were introduced into America by the first colonists, but they were commonly used as "split peas" until the 1700's. Columbus planted peas in the West Indies. From there, the seeds spread far and wide.



POTATOES

Green Mountain
Irish Cobbler
Lady Finger
Russet Burbank

The potato is the most important vegetable in the world today. Potatoes are thought to have originated in the Andes of South America. They became important in Ireland in the 1500's. They were first brought to New England by an Irish immigrant in 1719. By the mid-19th century, potatoes were an important staple crop of Northern Europe, the British Isles, and North America. Potatoes formed such a large part of Ireland's food that a serious potato blight in 1846-47 caused a famine.

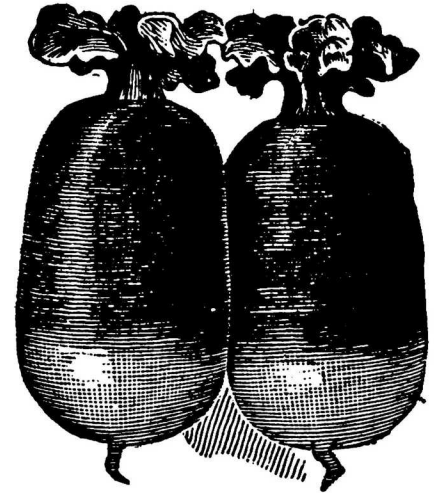


PUMPKINS

Connecticut Field (a direct descendant of the pumpkins the Indians gave to the Pilgrims)

Squash and pumpkins are closely related. They are natives to the Americas. The Indians were growing pumpkins for hundreds of years before the first Europeans came to America. Jack-o-lanterns were made in the British Isles and France before Christ. They were made from turnips, beets, and potatoes. When the settlers came to America, they discovered the orange pumpkins were perfect for that purpose.

The colonists ate pumpkins with great regularity. One Pilgrim wrote: "We have pumpkins at morning and pumpkins at noon, If 'twere not for pumpkins we'd soon be undoone."



RADISHES

Black Spanish
China Rose or Rose-Colored
Chinese
French Breakfast
Long Scarlet

China is the origin of the radish. This vegetable was a common food of the Egyptians, ancient Romans, and Greeks. The radish was brought here by Columbus.



SQUASH

Boston Marrow
Green Hubbard
Summer Crookneck or Warty
Crookneck
White Bush Scallop or White
Patty-Pan

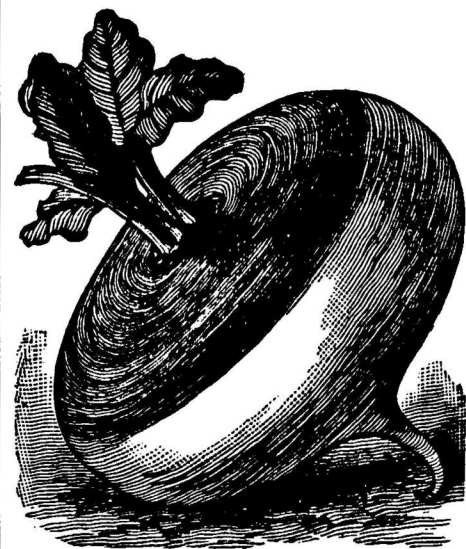
Some varieties of squash were cultivated as long ago as 6000 to 4300 B.C. Squash was a staple food of the Indian tribes all over America. European visitors to the Atlantic coast discovered summer squash growing there in the 1600's.



TOMATOES

Ponderosa
Red Pear
Yellow Plum

The tomato originated in the Andes of South America. Even though it was American in origin, it was thought to be poisonous and grown only for decoration. Tomatoes were popular in Europe, but Americans were afraid to try them. Thomas Jefferson grew them in 1781 and tried to convince people they were harmless. But it was not until the 1840's that tomatoes were widely used. The tomato is now our most popular home garden vegetable.



TURNIPS

Purple Top Strap Leaf

Originally from the Mediterranean, turnips were enjoyed by ancient Romans and Greeks. They were brought to North America by Jacques Cartier who planted them in Canada in 1541. Turnips were also grown by the colonists at Jamestown, Virginia, and the Massachusetts colony.



Seed sower

Activities

1. Vegetable Concentration—Using two identical seed catalogs, cut out pictures of vegetables. You will need at least 20 to 22 different kinds. Cut out two of the same picture of a vegetable variety. Paste these pictures on pieces of tagboard or other lightweight cardboard. Cut to the size of playing cards (2½ inches by 3½ inches). Label each picture. You may wish to cover these with clear contact paper for protection. Any number of players may play. Shuffle the pack and lay all the cards face down, one at a time, so that no two cards touch or overlap at the corners. The entire surface of a table is usually necessary to make room for all the cards.

Object of the game—To locate pairs of cards of the same vegetable (two Connecticut field pumpkins, two scarlet runner beans, etc.).

To play—Each player in turn must turn any two cards on the table, leaving the first face up until he/she has turned the second. If the two cards form a pair, the player takes them and turns up two more cards. Whenever the two cards the player turns up do not form a pair, he/she turns both cards face down again, leaving them in exactly the same position on the table as they were in when first turned. The turn then passes to the player on the left.

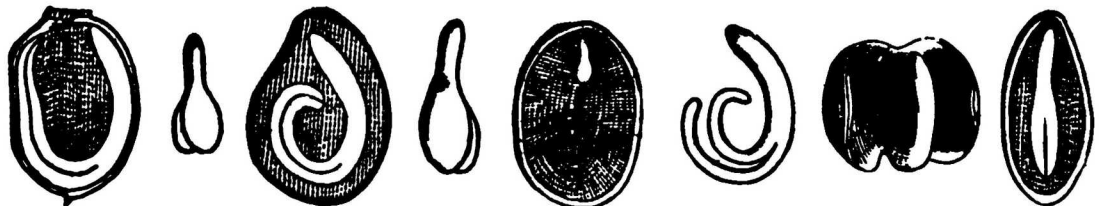
The winner is the player who has the greatest number of vegetable pairs at the end of the game.

Take nine beans, rub each one over your warts, and then throw the beans in a well. Your warts will disappear.

2. You may wish to plant a demonstration heritage garden of these heirloom vegetables at a museum site, school, public library, or nature center as a club activity. What and how much you plant will depend on the amount of space you have.

3. Mystery Seed Identification—Some keys open doors. This Seed Identification Key is to help you identify the different kinds of vegetable seeds in your MYSTERY VEGETABLE GARDEN. The key will tell you the names of the different kinds of seeds.

Directions for leader: Working with a key will teach your members observation skills, how to identify some common vegetable seeds, and patience. Provide one envelope for each member. In each envelope, place three to four heirloom seeds of the following: three to four varieties of beans, two varieties of corn, and seeds of any variety of beet, cabbage (or radish or turnip or cress), pumpkin (or squash), peas, sunflower, onions, parsnip, lettuce (or carrot), and tomatoes. If the seeds you are using are coated with a colored fungicide, wash them with a damp paper towel and dry, so as not to mask the true color of the seeds. Have members wash their hands after handling the seeds to wash off any fungicide that they might have gotten on their hands. Seal the envelopes. Give each member an envelope along with a copy of the Seed Identification Key (page 19).



STEP 1. Carefully empty the seeds on a large sheet of white paper. Look at the seeds. List some of the ways they are different. Are there differences in size, shape, color, and texture of the seeds?

STEP 2. Group or classify the seeds that are alike into separate piles on the paper. You may need to use a pencil or toothpick. How many kinds can you find?

STEP 3. Select three to five seeds of the kind you want to identify. Observe that

there are some differences in size, shape, or color even though all the seeds are the same kind or are closely related, except carrots and lettuce which belong to different plant families.

STEP 4. There are two or three choices on each step of the key. Pick the best choice and go on to the next step as directed. The choices will lead you step-by-step to the name of the seed.

Seed Identification Key

If the seeds are . . .

Step A . . . over one centimeter long (———), go to Step B.
 . . . less than one centimeter long, go to Step F.

Step B . . . colored, smooth, and curve-shaped, go to Step C.
 . . . flat, longer than wide, and shaped like a tear drop, go to Step E.

Step C . . . colored with spots, go to Step D.
 . . . smooth, without spots, and brown **KENTUCKY WONDER BEAN**

Step D . . . tan with maroon spots **DWARF HORTICULTURAL BEAN**
 . . . off-white with brown spots **JACOBS CATTLE BEAN**
 . . . purple with dark purple markings **SCARLET RUNNER BEAN**

Step E . . . light tan, plain, with a line around the edge **SQUASH, PUMPKINS**
 . . . tan with black stripes **MAMMOTH RUSSIAN SUNFLOWER**

Step F . . . green, round, and either smooth or wrinkled . . . **PEAS**
 . . . tear-shaped, flat, with a light colored ^ at base, go to Step G.
 . . . 5 millimeters long (—) or less, go to Step H.

Step G . . . yellow kernels **STOWELL'S EVERGREEN SWEET CORN**
 . . . black kernels **BLACK MEXICAN CORN**

Step H . . . 5 millimeters long (—), tan, and flattened with ridges
PARSNIPS
 . . . less than 5 millimeters long, go to Step I.

Step I . . . brown, round or flat, and smooth **RADISHES, CABBAGES, TURNIP, CRESS**
 . . . round and rough or flat, with lines, go to Step J.

Step J . . . roundish, rough, and warty looking **BEETS**
 . . . rounded and angular or flattened, go to Step K.

Step K . . . black, 3 millimeters long (—), with angles **ONIONS**
 . . . tan, flattened, long, and rounded, go to Step L.

Step L . . . 3 millimeters long, thin, and flat with lines **CARROTS AND LETTUCE**
 . . . 2 millimeters long (—), rounded, and fuzzy with no lines **TOMATOES**

