

# 2021 Heirloom Seed Library



Contact Master Gardeners ● [gardener@co.yakima.wa.us](mailto:gardener@co.yakima.wa.us) ● 509-574-1604

# Return Seeds to the Library

1. Borrow seeds from the library.
2. Save some seed from what you grow.
3. At the end of the season, you can return seed in person or by mail to WSU Extension Monday-Friday 9:00-12:00 and 1:00-4:00, located at:

Master Gardeners  
WSU Extension Office  
2403 S 18th, Suite #100  
Union Gap WA 98903

You may also return seeds on Thursday mornings 8:00-9:30 at the Heirloom Garden, located across the parking lot from the Master Gardener Greenhouses. This is only for drop off as there is no mail service at this location.

1522 South 18th Avenue  
Yakima WA

# Alphabetical Listing

Our seeds are not listed alphabetically. They are grouped by botanical plant families because they have similar growing needs; often fall prey the same plant viruses and insect pests; and have similar requirements to save seeds. Other times they are arranged by groups that are not related botanically but do have similar growing requirements.

## Vegetables page

Arugula	8
Beans	5-6
Beets	10
Burnet	8
Cabbage	8
Cameroon Huckleberry	23
Carrots	10-11
Chard	10
Collards	8
Cress	9
Cucumber Melons	12
Cucumbers	12
Eggplant	16
Garden Huckleberry	23
Golden Berries	23
Ground Cherries	23
Kale	9
Lettuce	8
Mache	9
Melons	13
Mesclun	9
Okra	23
Orach	9
Peas	7
Peppers	17
Pak Choi	9
Pumpkins (squash)	14-16
Radishes	11
Sorrel	9
Spinach	9
Squash	14-16
Tomatillos	23
Tomatoes	19-22
Turnips	11
Watermelon	13
Zucchini (squash)	14-16

## Herbs page 24

Basil
Cilantro/Coriander
Dill
Lemon Balm
Lovage
Oregano
Parsley

## Flowers page 25

Cardoon
Columbine
Coneflower
Coreopsis
Cosmos
Love in a Puff
Marigold
Salvia
Snapdragons
Zinnia

## Cover Crops page 26

Agricultural Mustard
Buckwheat
Cowpeas
Daikon Radish
Sunn Hemp
Winter Mix

## Where to Return Seed

See page 2

# Welcome to the Heirloom Seed Library

**The Heirloom Garden** broke ground in 2014, when Master Gardeners and the North Yakima Conservation District partnered to provide land, water, and start-up funds for a vegetable garden of open pollinated and heirloom varieties, many of which are rare and endangered. The garden creates a hands-on learning experience, using low-cost, sustainable, organic methods. The main goal is to create and maintain a seed lending library, provide free gardening education; and donate all remaining produce to local meals programs. Every year we donate nearly a ton of fresh produce to our community.

**The Heirloom Seed Lending Library** loans seed to gardeners who plant the seed and then return new seeds that they grew from the borrowed ones. We understand that not all the borrowed seeds will grow to maturity and not all the seeds saved will be viable. Things happen! Learning to save seed is a process, and our free seed saving classes may help. By joining with other seed savers we improve health and nutrition; grow varieties with the flavor and qualities of our choosing (rather than those of large commercial growers); adapt varieties to our unique climate and soils; and increase plant diversity throughout our community. The Heirloom Seed Lending Library is a new project that is open to the public on a limited basis due to the size of our seed inventory.

**Master Gardeners Free Classes** on topics specific to vegetable gardening are offered on the third Saturday of each month from May to September at 10:00 AM in the Heirloom Garden, located at 1522 South 18th Avenue, Yakima (the same location as our Plant Sale). The Heirloom Garden is open to the public by invitation or upon request. For more information contact Master Gardeners at: [gardener@co.yakima.wa.us](mailto:gardener@co.yakima.wa.us) or 509-574-1604

The Demonstration Garden is an ornamental garden located in Ahtanum Youth Park, at 1000 Ahtanum, Union Gap. Free classes are offered on a wide range of garden related topics on the second and fourth Saturday of each month from April to October at 10:00 AM. The Demonstration Garden is open to the public during park hours. Parking is free while visiting the garden.



Children take a tour the garden.



How to Prune Tomatoes

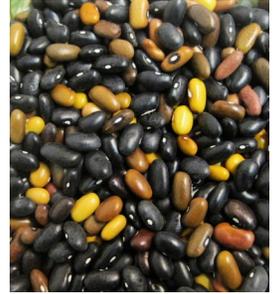
# Legumes

## Beans

All beans require warm weather to germinate. When soil temps remain consistently above 60-65°. Sow 1" deep and 3-6" apart. Vining varieties need strong trellising. Pole beans set pods all summer, while bush beans tend to produce a crop all at once. Beans rarely cross pollinate; **however runner beans are the exception and will cross pollinate easily with all other runner beans!** To save seed, let pods remain on the plant until the pods fill out with fully mature seeds, and plants start to yellow and die back.

### Washington Variety! Beefy Resilient Grex Pole

A new variety from Carol Depp developed in WA. A rare cross between different bean species. Bred for wide diversity rather than uniformity. High yields, drought and disease resistance. Small beans of black, tan, red, and gold. Short vines, about 6' tall. A dry bean that cooks quickly. 75 days.



### Blue Lake Bush Blue Lake Pole

The most common bean in the US, and with good reason. Green 6" pods take a long time for strings to develop. Heavy yields. A snap bean used fresh or for canning. 60 days for bush beans. 70 days for pole beans.



### Borlotti Lamoni Bush Borlotti Lamoni Pole Stock Limited

In 1530 Pope Clement VII received New World bean seeds as a gift from the Spanish Court. He gave some seeds to a monk traveling to a village in Northern Italy. These beans eventually replaced peas and broad beans in that region. Records show this bean has been grown on the Lamoni Plateau, continuously since then. A vigorous grower and heavy producer. Use as shelling or dried beans. Unfortunately they lose their bright color when cooked. 75 days.



**Stock Limited  
On Pole Variety**

### Cherokee Trail of Tears Pole

The Cherokee people carried this bean seed from Tennessee to Oklahoma on a forced march in the 1830s. So many people died that it is still called the Trail of Tears. This variety has green pods that gradually turn purple with shiny black seeds. Use as a snap or dry bean. 65 days. Seed donated by Gini Obert.



### Cherokee Wax Bush

All-American Selections winner in 1948. A yellow wax bean with shiny black seeds at maturity. Can be eaten as a snap or dried bean. Resistant to pests and tolerant of poor weather conditions. Very heavy yields. 45-55 days.



## Asian Long Beans

(*Vigna unguiculata*) A warm weather staple crop of East Asia where they have been grown for centuries. The tender pods are crisp and without many strings. Very heat tolerant, will continue to set pods when common beans drop their flowers. High yielding. The aggressive vining habit requires trellising. Harvest while pods are very slender. Once beans inside begin to swell the pods will become fibrous. Cross pollination between varieties is rare.

### Asparagus Long Bean

Vigorous climbing vines are easy to grow. Heavy yields. Needs warm soil to germinate and sturdy trellising. Pick when long green pods are 12-18 inches long. Best when sautéed, stir fried or pickled. 70 days. Seed donated by Diana Pieti.



### Chinese Red Noodle Long Bean

Vigorous climbing vines are easy to grow. Heavy yields. Needs warm soil to germinate and sturdy trellising. Pick when long burgundy pods are 12-18 inches long. Beautiful burgundy beans are easy to see at harvest. Some of the red color is retained when cooked. Especially attractive when mixed with green long beans and sautéed together. 70 days.



## Common Pole and Bush Beans

(*Phaseolus vulgaris*) A warm weather staple crop of North and South America where they have been grown for over 10,000 years. They were a very important source of protein and calories. The immature pods are tender and crunchy, and should be eaten before the seeds fill out. In shelling beans the seeds are filled out but still green and tender, the pods are not eaten. For dried beans, leave pods on the plants until mature and pods dry on the vine. Strings develop in all varieties as pods mature. Cross pollination among varieties is rare.



### Dragon's Tongue Bush

A wax bean originally from Holland in the 1700's. The 6" pods are yellow with purple streaks. Early, compact plants. Can be used as snap or shelling bean, especially good in stir fries. Very attractive, compact plants. Can be grown in containers. High yields. 60-90 days.



### Good Mother Stallard Pole

This beautiful bean is plump and round with purple and white color. Grown for their very creamy texture, especially good in baked beans and soup. Color usually fades to tan during storage. Average yields. 85 days.



### Kentucky Wonder Pole

One of the most popular beans of all times. Grown very widely in the South before the Civil War. Vigorous, very high yields of 7-9" meaty flat green pods. Usually eaten as a snap bean, but can be used as a dried bean too. 67 days to green. Seeds donated by Sarah Judd.



### Washington Heirloom! Pellegrini Pole AKA Monachine

A Mondavi (wine) family heirloom from Italy in the early 1900s. Given to Angelo Pellegrini, a UW professor, to save from extinction. He grew and selected plants adapted to the Pacific NW. Grown for decades on the Pellegrini family farm on Whidbey Island where it became a local favorite. Long vines. A yellow Romano with tan and cream seeds. Very creamy dried bean. Very high yields. Seed donated by Farrah King.



### Purple Triumph Pole AKA Trionfo Violetto

Lavender flowers with green foliage and deep purple vines and pods. Grows to about 8 feet. Vigorous. Good yields. Pods turn green when cooked. Very good flavor. 75 days.



### Red Swan Bush

A very beautiful bush bean with abundant pink and white blossoms and very high yields of bean pods in stunning colors of magenta to burgundy that turn green when cooked. The red pods are very easy to see for harvesting. Can be used as a snap or dried bean. Excellent buttery flavor and creamy texture. 55 days. Seeds donated by Gloria Wright.

### Washington Heirloom! Rockwell Bush

A very rare heirloom brought to Whidbey Island in the late 1800 by Elisha Rockwell. Almost impossible to buy as there are only 4 suppliers, all descendants of Whidbey Island families. Very creamy beans that hold their shape in cooking, usually for baked beans. Listed in Ark of Taste. 60-70 days. Seed donated by Farrah King.



### Ruth Anne's Sulfur Bush

A very creamy dried bean brought from Bavaria to the Dakotas by Ruth Anne Tygg in the early 1900s. When Ruth Ann died the beans were lost to the family. Forty years later a few beans were found and donated to the Seed Library by grandchildren, James and Naomi Wenzel. High yields. 75 days.



## Runner Beans

*(Phaseolus coccineus)* These are NOT the same species as pole beans. Usually grown ornamentally, however all parts are edible. Flowers are very attractive to humming birds. Seeds will not germinate in cool or wet conditions; however, they are tolerant to light frost in the fall. Pods develop in cool fall weather. Wide, flat pods grow 7-9" long with a firm, meaty texture. Very aggressive vines up to 20 feet need sturdy support. **All runner beans will readily cross pollinate with other runner beans.**

### Scarlet Runner

Grown primarily for its red flowers but every part of this plant is edible. Does not germinate well in cool, wet spring weather, but will survive light frost in the fall. Vigorous vines grow 12-15 feet. Bean pods develop in fall. Flat pods are 6-8" long with good flavor, and firm meaty texture. Good pickled, steamed or sautéed. Large dried beans are creamy. Attracts hummingbirds and bees. 90 days.



### Sunset Runner

Grown primarily for its pink flowers but every part of this plant is edible. Does not germinate well in cool, wet spring weather, but will survive light frost in the fall. Vigorous vines grow 10-12 feet. Bean pods develop in fall. Flat pods are 6-8" long with good flavor, and firm meaty texture. Good pickled, steamed or sautéed. Large dried beans are creamy. Attracts hummingbirds and bees. 90 days.



## Peas

*(Pisum sativum)* Peas are one of the oldest crops in the world. First cultivated 11,000 years ago in the Middle East, they were originally grown for their dried seeds. Types of peas are: shelling, snow, and sugar snap. All are all grown the same way. Plant seeds 1" deep and 3" apart in early spring when soil temp is above 50°, in light soil. Pole peas need support. Bush peas need light support or may support each other when planted closely together in a wide row. Peas very rarely cross pollinate. To save seed, let pods remain on the plant until the pods fill out with fully mature seeds, and the plants start to yellow and die back.



### Dwarf Grey Sugar (Snow Pea)

Old heirloom introduced in the 1856. Sweeter than most snow peas. Often grown for the beautiful edible lavender-red flowers and tender shoots. Average yields. Pick light green pods when very small, 2"-3" long, flat but not yet filled out. Very short vines, only 24" tall, don't need staking. More heat tolerant than other varieties. 65 days.



### Early Perfection (Shelling Pea)

Heirloom dates to the 1950s. A sweet pea that holds up well for canning or freezing. Each 3" pod has 7-10 peas. Grows well in poor soil, drought tolerant and mildly disease resistant. 24-30" tall. 63 days



### Oregon Sugar Pod II (Snow Pea)

Used for fresh, stir fry, and holds up well for freezing. Pods are 3-4". Harvest before seeds fill out. Vines grow to 3-5' needs trellising. 55 days.



### Progress #9 (Shelling Pea)

Very prolific shelling pea with 7-9 plump peas per pod. Holds well on the vine so picking time isn't as critical. Compact vines 16-20" tall. 58 days.



### Purple Podded (Shelling Pea)

Beautiful purple and magenta flowers are followed by deep-purple pods filled with green peas. Pretty enough to be grown as an ornamental. Used as a shelling pea. Strong, climbing vines 4'-5' tall. 60-65 days. Seed donated by Sandra Westford.

### Snowbird (Snow Pea)

Sweet tender pods used for salad and stir fry. Harvest before seeds fill out. Mild disease resistance. Dwarf plants 18" tall. 58 days.



### Sugar Ann (Snap Pea)

All American Selections winner 1984. Almost 2 weeks earlier than other pea varieties. Very short, compact vines, grows well in containers. Good yields for such a small plant. 24" tall. 52 days. **Very Limited Stock.**



### Sugar Daddy (Snap Pea)

Tender 3" pods are truly stringless. Harvest when pods are plump, but not yet completely filled out. Disease resistant. 24-30" vines benefit from trellising. 65 days.



### Sugar Magnolia (Snap Pea)

The first purple podded sugar snap pea, grows on 6'-7' vines, beautiful purple flowers, sets pods over a long period of time. Sweetest before pods get too plump. Not as sweet as other sugar snap varieties. Very attractive in spring salads. 70 days.



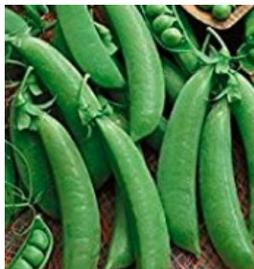
### Sugar Snap (Snap Pea)

A snap pea with unusually thick-walled pods that are at their peak around 3 inches long. All American Selections winner 1979. Very sweet. This is a bush variety with some mild disease resistance. Grows to 30" tall. 60 days.



### Super Snappy (Snap Pea)

Produces some of the largest of sugar snap pods. Pods can be eaten as a snap pea or let seeds fill out and use as a sweet shelling pea. Short vines 28-32" tall. Needs little support. 65 days.



### Taichung (Snow Pea)

Snow peas are grown for the edible pods. Harvested before seeds develop. Usually eaten raw or in stir fries. Height of vines is inconsistent, growing 3'-6' tall. Mild heat tolerance. 60-65 days.



## Lettuce

*(Lactuca sativa)* A cultivated crop since ancient times, originating 4,000 years ago in the Mediterranean area. Lettuce is easy to grow but needs cool weather, bolting quickly in the heat. Direct sow in spring when soil is 50-65°. Seeds sprout and grow quickly in mild weather. Thin to 4" apart for leaf lettuce and 8-12" apart for head lettuce. Succession plant for a continuous crop. Harvest outer leaves of loose leaf varieties leaving the small center leaves to harvest again a few days later. For fall crop, sow 8 weeks before hard frost, when soil is no warmer than 72°. Lettuce varieties do not easily cross pollinate; an 8-10 feet isolation distance between varieties is recommended. For seed saving, allow plants to bolt and mature without eating any of the leaves. Seeds are ready 21 days after bloom.



### Bibb

A very popular All American Selections winner. Loose heads have buttery texture. Can harvest outer leaves or wait for heads to form. Dark green leaves with lighter yellow centers. Quick to bolt in heat. A better variety for fall, but doesn't tolerate hard frost. 50-60 days.



### Little Gem

A small Romaine type lettuce, compact size, upright growing habit. Better when allowed to mature into a head. Very mild flavor. Not tolerant to heat or hard frost. 50 days



### Merlot

A rare, loose leaf variety with beautiful glossy, curly leaves. The deepest red of all red varieties. Doesn't fade to bronze. High in antioxidants. One of the best fall varieties. Will tolerate fall frost to 28° if grown under cover or in a sheltered area. 50-60 days. Seed donated by Phyllis Pugnetti



### Parris Island Cos

Bred by the USDA on Parris Island, SC in 1952. Crisp romaine with 10" leaves. Tolerates heat and cold better than most varieties. Harvest individual leaves or wait until heads form. 40-50 days.



### Red Leaf Lettuce

Broad red-bronze leaves are somewhat ruffled forming an open rosette. Harvest outer leaves leaving inner leaves to harvest a few days later. Grows continuously until hot weather. 40-50 days.

### Red Romaine

Big upright heads with bright red crunchy leaves and chartreuse centers. Leaves are brighter red in light shade and more bronze in full sun. Harvest individual outer leaves, or wait until heads form. 50-60 days.



### Simpson Black Seeded

One of the most tender and delicately flavored leaf lettuces with large chartreuse ruffled leaves. One of the best fall varieties. Will tolerate fall frost to 30°. 40-50 days.



## Other Leaf Crops

### Arugula—Rocket

*(Eruca sativa)*

Ancient crop grown in Rome. Tender smooth leaves with a peppery flavor. Eat fresh or cooked. Very cold hardy. Flowers are edible too. 50 days. Seed donated by Carol Woolcock.



### Burnet

*(Sanguisorba minor)*

Easy to grow perennial. Mild cucumber flavor used in salads, sandwiches, and flavored water. Best flavor in cool weather. Use baby leaves, mature leaves develop bitter flavor and grainy texture. Vigorous re-seeder, easily controlled by cutting to the ground when in bloom.



### Cabbage—Golden Acres

*(Brassica oleracea)* Early with compact heads of 4-5 pound cabbages. Sweet and crisp. Seeds started in early March will ripen in early July, before cabbage worms and aphids arrive in Yakima. 55-60 days.



### Cabbage—Red Acres

*(Brassica oleracea)* Early with compact heads of 4-5 pound cabbages. Sweet and crisp. Seeds started in early March will ripen in early July, before cabbage worms and aphids arrive in Yakima. 55-60 days.



### Collards—Georgia

*(Brassica oleracea)* Plant transplants mid summer for fall crop. Large flat leaves have a mild cabbage like flavor that is better after light frost. 65 days.



**Cress—Dutch Broad Leaf**

(*Lepidium sativum*) A ruffled large leafed cress. Needs consistently moist soil, that is high in organic matter. Prefers full sun, but will survive in light shade. Allow plants to become well established growing to 6-12" tall before harvesting individual leaves. Does not cross with watercress. 40 days

**Cress—Watercress**

(*Nasturtium officinale*) One of the first plants cultivated by humans. Small mild leaves. Needs consistently moist soil, high in organic matter. Prefers full sun, will survive in light shade. Allow plants to become well established growing 6-12" tall before harvesting individual leaves. 30-40 days. Seed donated by Dee Adams.

**Kale—Blue Scotch Curly**

(*Brassica oleracea*) Compact plants tough leaves are best used cooked or for freezing. One of the most cold hardy varieties. Cold weather makes kale sweeter. Kale will grow year round when mulched heavily in the fall. Very attractive in ornamental beds. 65 days.

**Kale—Lacinato AKA Black or Dinosaur**

(*Brassica oleracea*) An Italian heirloom. Deeply savoyed dark colored leaves are tough and are best when used cooked or frozen. Very attractive in ornamental beds. Very cold hardy. 60 days.

**Kale—Red Russian** (*Brassica napus*)

Blue-green leaves with lavender veins. Cold tolerant. Very mild flavor and tender leaves, best for salads. Cold weather makes kale sweeter. Will grow year round when mulched heavily in the fall. Attractive in ornamental beds. 60 days.

**Mache AKA Corn Salad** (*valerian locusta*)

A true winter green that grows in small 3" rosettes. Very mild flavor, tender leaves. Good for salad, but not cooked. Germinates when soil and weather are cool. Grows very, very slowly. Be patient! Harvest from Thanksgiving to Valentine's Day.

**Mesclun Spicy**

Mixed spicy salad greens of arugula, red leaf lettuce, endive, radicchio and mustard.

**Mesclun Sweet**

Mixed mild salad greens of ruby lettuce, Bull's Blood beat leaves, Bloomsdale spinach, Simpson lettuce, and Tendergreen mustard.

**Mustard—Giant Red Leaf**

(*Brassica juncea*) Very ornamental cold weather plant. Often used as filler in empty spring or fall garden beds. Adds a kick to a sandwich or salad, but mellows when sautéed. Plant 12 inches apart. 45 days. Seed donated by Phyllis Pugnetti.

**Mustard—Tendergreen**

(*Brassica rapa*) Mild flavor, tender leaves. Does not tolerate heat. Grow early spring, and again in late summer to ripen in fall. Use in salads or lightly sautéed. 45 days.

**Orach** (*Atriplex Hortensis*)

Related to spinach and chard. Native to the Alps. A cool weather crop that tolerates warm weather. Grows long after other salad greens are done. Harvest individual leaves. Use in salads or lightly sauté. Bolting plants have ornamental seed bracts up to 8' tall. 40-50 days.

**Mixed Green**

Mostly light green. May have a few plants in dark green and red shades.

**Mixed Red**

Mostly shades of red, purple, and bronze. A few plants may be green.

**Pak Choi**

(*Brassica rapa subsp. Chinensis*)

An Asian green common in stir fry and salad. Leaves are sweet with a mild mustard flavor. Can grow spring and fall. Not heat tolerant. 45 days.

**Sorrel—Red Veined****AKA Bloody Dock**

(*Rumex sanguineus*) Very attractive perennial that grows in 12' mounds. Leaves have a tart flavor. Pick small, when weather is cool. Good in salad, as a tart pesto for fish, in a cucumber salsa, or used as an herb. Slow to start from seed. Plants should be divided every 2-3 years.

**Spinach Bloomsdale Long Standing**

(*spinacea oleracea*) A very old heirloom. Has large curled leaves, cold hardy, slow to bolt. Good yields. Prefers sun, tolerates partial shade. 50 days.



# Root Crops

## Beets and Chard

(*Beta vulgaris*) Beets originated in Egypt and Greece, then spread across Europe with the Roman army. Centuries of selection have created, sugar beets, forage beets, table beets, and chard, but all are botanically the same species. Beets are not particular, but prefer to germinate in very warm weather and soil to germinate, 75-85°, then mature in gradually cooling weather. Beets will not tolerate hard frost. Sow in full sun or light shade in fertile soil 1/2" deep and 2" apart and thinning to 4" apart in all directions (8" for chard). Beets are biennials that grow roots and leaves the first season and bloom the next. Will not flower or set seed until the roots have been exposed to 6 weeks of consistently cold weather, between 32-40°. Chard is the most cold hardy of all beets. All beets and chard can cross pollinate. Pollen can travel up to 5 miles in the wind. This doesn't create much problem for home gardeners, as so few gardeners let beets go to seed.



### Bull's Blood

This beet is grown mostly for its beautiful leaves in colors of iridescent dark purple and magenta. The edible roots and leaves are most tender when small. 40 days for leaves, 60 for roots.



### Chioggia AKA Candy Stripe

An Italian heirloom from the early 1800s that arrived in the US around 1860. The red and white rings are attractive in salad. Beets turn pink when cooked. A mild, sweet beet. 55 days.



### Cylindra

An old heirloom from Denmark. The long cylindrical roots produce more uniform slices than round beets and double the yields! Tender and sweet with a smooth texture. Great for canning and pickling. Tender leaves. 55 days. Seed donated by Phyllis Pugnetti.



### Detroit Dark Red

Old variety introduced in 1892. Still the most popular beet among home gardeners. Good all purpose beet. Very dark red, uniform roots. 60 days.



### Early Wonder Tall Top

A good choice when you want tasty roots and mild leaves. Grows well in both warm and cool weather. Harvest when beet roots are small and tender. Leaves stand tall above soil for cleaner leaves at harvest. 50 days.

### Fordhook Giant White Chard

Very mild flavor. Large leaves can be used like spinach. White stems can be crunchy like celery. Grows from early spring until hard frost. With a layer of mulch it may winter over and grow again in spring. 50 days.



### Ruby Red Chard

So beautiful it works well in ornamental beds too. Leaves can be used like spinach, crunchy stems like celery. Grows from early spring to hard frost. With a layer of mulch it may winter over and grow again in spring. 50 days.



## Carrots

(*Daucus carota*) Wild carrots date back 10,000 years and may have originated in Persia. They grow widely throughout Asia, the Middle East, and Europe. Wild carrots are very tiny and bitter; and were originally used as medicine. They were domesticated 5000 years ago. Selecting for large roots and sweet flavor has made the carrot one of the most widely eaten root crops in the world. Orange carrots resulted by crossing yellow and purple carrots in Holland during the 1500s.

Sow carrots in early May for a summer crop or mid July for a fall crop. Carrots need deeply prepared light soil. Sow seed 1/4" deep, thin to 4" apart. Carrots that reach maturity in cool weather are much sweeter than those ripened in summer heat. Some varieties will overwinter with 4-5 inches of mulch. Carrots are biennials growing leaves and roots in the first year and flowers that set seed in the second. Flowers are insect pollinated and need at least 8 plants to assure numerous visits by pollinators. Cross pollination occurs between all varieties which also includes wild carrots and Queen Anne's Lace.

### Autumn King

A good winter carrot. Does not like heat. Grows very large and sweet when allowed to mature in fall and winter. Fully mature carrots weigh a pound or more. Plant in late July. 70 days.



### Chantenay

Develops very sweet, thick, stocky roots up to 2 pounds each, when allowed to mature in fall and winter. May be bitter when ripened in summer heat. Plant in late July. 65 days.



### Danvers

Introduced in 1947, bred for improved heat tolerance. Plant in early spring. Red-orange, 7-8" long, and uniform shape. Not frost tolerant. Does not do well in fall gardens. 70 days.





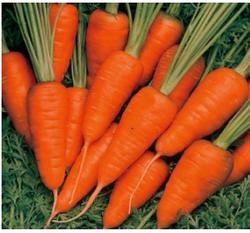
### Little Fingers

Very sweet. Small shallow roots are a better choice for heavy clay soils than longer rooted carrot varieties. Roots are 5" long and 1/2 wide. A Nantes variety. Not frost tolerant. Plant in early spring. 55-65 days.



### Scarlet Nantes

Good all purpose carrot, adapts to a wide range of soils and climates. Not tolerant or repeated freeze-thaw cycles or hard freeze. Best when planted in early spring. 65 days.



### Sweet N Short

Very sweet. Small shallow roots are a better choice for heavy clay soils than longer rooted carrot varieties. Cone shaped roots are 4" long and wide at the shoulder. A Chantenay variety. 55-65 days.



### Yellowstone

A totally yellow carrot with a mild sweet flavor when allowed to ripen in fall and winter. Bitter when ripened in summer. Fully mature carrots may be a pound or more. Mulch deeply to prevent bitter green shoulders. Plant in late July. 75 days.

## Radish

*(Raphanus sativus)* Radishes originated the Eastern Mediterranean about 4500 years ago. They were important for both food and medicine. Radishes are a quick growing annual that prefers cool weather. Large radishes take longer to grow and do best when planted in July for a fall crop. Small radishes can be planted spring or fall. When ripened in hot weather radishes get woody and hot. Fall radishes can be left in the ground until soil temps drop to 35°. Plant in loose well drained soil that is not overly fertile. Do not add nitrogen. Plant seeds about 1/2" apart and thin to 1-2" apart. To save seed, radishes should be planted in the spring and allowed to flower in summer. Radishes cannot pollinate themselves. Pollen must be carried by insects and need at least 6 plants to assure numerous visits by pollinators. Cross pollination will occur between all radish varieties. For seed saving separate each variety by 1/2 mile.



### Cherry Belle

A 1949 All American Selections winner and still the most popular variety in the US. Roots are best when harvested about an inch or smaller. Grows well spring or fall. 30 days.

### Cherry Giant

Plant in late July for fall radishes the size of tennis balls! A German winter variety, tolerant of light frost. Can harvest anytime when roots are small or large. 30-50 days



### China Rose

Brought to the US from China by Jesuit missionaries in the 1850s. Mild sweet flavor, 6-8" long. Plant in late July for fall radishes. Harvest before the first hard frost. 35-55 days.



### Sparkler

Similar to Cherry Belle but white on the root end. Roots are best when harvested about an inch or smaller. Grows well spring or fall. 30-45 days.



### Watermelon

Plant in late July for fall radishes. Grown for its beautiful color, spicy heat, and carrot like texture, and large size. Roots will not bulk up in the summer heat. Center of roots turn deep red in cold weather. Very cold tolerant. 40-60 days. Seeds donated by Phyllis Pugnetti.



## Turnips

*(Brassica rapa)* Turnips have been eaten by humans and animals for 10,000 years. They were domesticated independently in Asia, India, and Europe. Turnips are a biennial that grow leaves and roots the first year, flowers and seeds the second. They must be exposed to at least 6 weeks of cold temps consistently 35-45° in order to set seed. Turnips are undemanding, growing in cool weather 45°-70° but turn woody and bitter when weather is above 75°. Sow seeds in full sun or light shade, in fertile soil 1/2" deep and 2" apart, then thin to 4' apart in all directions. Turnips cannot pollinate themselves and require insects for pollination. It is necessary to grow at least 5 plants of the same variety to assure good pollination. Will cross pollinate with mustards, Chinese cabbage, and broccoli raab. To cross with rutabagas is exceptionally rare.

### Purple Top Turnip

Smooth round roots are sweet and tender, 3-4 inches. Young leaves are edible in salads or as cooked greens. 50 days.



### Gilfeather Turnip

Listed in Ark of Taste. Very rare cross between an Irish variety of turnip and a rutabaga on the farm of John Gilfeather around 1900. Gilfeather was very protective of his turnips and refused to share seeds with his neighbors. Legend says that upon his death neighbors sneaked into his field and stole turnips to grow to seed; thus saving this variety from extinction. Larger, sweeter, milder, and more cold tolerant than most turnips. The official state vegetable of VT. 75-90 days. Seed donated by Phyllis Pugnetti



# Cucurbitas

Cucurbitas form a very large plant family made up of many species including: cucumbers (*c. sativus*), melons (*c. melo*), squash (*c. pepo*, *c. maxima*, *c. mochata*, and *c. maxima*) and watermelons (*c. lantanus*). Each species can cross pollinate only within their own species.

## Cucumbers (*c. sativus*)

Cucumbers originated in West Asia and have been cultivated for 3,000 years. They spread across Europe with the Romans and arrived in the US in the 1600s. Plant when soil remains above 65°, in fertile soil with consistent moisture. Applying mulch after the soil has warmed to 70° will help retain moisture in the soil. Cucumbers set a large flush of fruits and then die back quickly. For higher yields and less problem with powdery mildew, plant a second crop about 4 weeks after the first planting. Trellising also reduces rot, powdery mildew, and some pest problems. Vines grow 5-6 feet. To save seed, fruits need to be very large, with hard skin, and should undergo a change of color. Cucumbers will readily cross pollinate with all other cucumbers (*c. sativus*) but not gourds, melons, squash, or watermelon.



### Gele Tros

An endangered yellow cucumber from Holland where it is called the 'ancient race'. Originally grown by the wealthy, when green cucumbers were considered low class. Yellow cucumbers are still quite uncommon. Average yields of 8" very attractive fruits. Harvest when pale yellow. Fruits turn bitter and tough as the skin turns gold. 60 days.



### Lemon

An old heirloom probably from India and introduced into the US in 1894. A crisp, mild flavor, never bitter. Flesh is cream to pale green. High yields. Harvest at tennis ball size. For fewer seeds, can also be eaten while small and pale green. 65 days



### Marketmore 76

The most popular cucumber grown in home gardens in the US and with good reason. Very high yields of dark green 8" fruits. Good slicer. Excellent taste, juicy, not bitter even when fruits get quite large. Disease resistant. Long vines benefit from trellising. Grow in fertile, warm soil. 60 days.



### Picklebush

Compact 2 foot vines, have 4", white spined fruits. Good yields. Resistant to powdery mildew. Good in containers. 55 days

### Straight Eight

All American Selections winner introduced in 1935. Smooth, dark green, straight with blunt ends are perfect for slicing and pickling. Harvest at 8 inches. 60 days.



### Suyo Long

A Chinese heirloom. Thin skinned, sweet, ribbed fruits, 16" long. Harvest at any size. Trellis for straight fruits. Not heat tolerant. Blossoms and fruit stop in the heat of August, dappled shade or shade cloth helps. 70 days.



## Cucumber Melons (*C. melo*)

A few cucumbers are actually from the melon species (*c. melo*). Sometimes referred to as cucumber melons. They will not cross pollinate with cucumbers but will readily cross with all melons in the (*c. melo*) species which includes musk melons, cantaloupe, and honeydew.

### Armenian (*c. melo*)

Light-green skin and flesh. Mild-tasting, never bitter, very long, ribbed fruits that grow in coils on the ground, but grow straight when trellised. Best harvested at 12-18 inches, before the skin gets tough. 65 days.



### Metki

#### AKA Dark Armenian / Painted Serpent

(*c. melo*) A rare heirloom. Dark green with light stripes. Mild and slightly sweet fruits, never bitter. Long slender fruits get 20-30" with small seed cavities. Once fruits are ripe, it takes 4-6 additional weeks to set seed. 65 days.



### Puglia Half Long (*c. melo*)

Similar to the Armenian but is more oval shaped. Skin is slightly fuzzy, but wipes off easily. Best harvested small before skin gets tough. Never bitter. Large fruits look like oval melons, and can be used as bowl to serve salad. 55 days.



## Melons (*C. melo*)

Melons were first cultivated 5000 years ago. Originating in North Africa or the Middle East. Melons include cantaloupe, honeydew, muskmelon, and many lesser known melons. At a time when sugar was rare and expensive, melons were valued for their sweetness. Melons need warm soil to grow, 70° or warmer. Soil needs to be fertile with lots of organic matter and even moisture. May start seeds indoors 4-6 weeks before transplanting. Melons can be frustrating to grow. They rely on insects for pollination, yet after many visits by pollinators, 85% of female blossoms abort. Planting with blooming flowers and larger numbers of melon plants will increase yields. Good leaf canopy is necessary to develop sugars in fruits. Seed should be saved from over ripe fruits. **Melons will cross pollinate only with other melons in the (*C. melo*) species and cannot cross with watermelons.**



### Charentais (*C. melo*)

A famous French heirloom bred in the 1920's. A small 2-3 pound melon with very sweet orange flesh. Harvest when blue-grey skin begins to turn golden and develops a strong aroma. Sweeter than most cantaloupe. 85 days



### Hale's Best Jumbo (*C. melo*)

Developed by a Japanese market gardener in California around 1920. It's flavor and earliness made it very popular. Beautiful 5 pound oval melons with green skin and gold netting. The flesh is salmon color, aromatic and sweet. 85 days.



### Ha'Ogen AKA Haogen (*C. melo*)

Named after the Israeli kibbutz where it was originally grown. Green flesh with flavor like a very sweet honeydew. Fruits are 3-4 pounds. Harvest when soft skin turns golden with green stripes. 85 days. Seed donated by Diana Pieti.



### Honey Rock (*C. melo*)

All American Selections winner 1993. Salmon flesh, delicate sweet taste. Melons are 3-4 pounds, early to ripen, and high yields. 80 days



### Ineya (*C. melo*)

Originally from the Soviet Union. A small melon 6-7" with a flavor similar to honeydew. White flesh is a little more firm and slightly crunchy than most melons. Very sweet. 80 days.

### Model Melon (*C. melo*)

A Polish heirloom. Flavor like very sweet honeydew with hints of cantaloupe. Small 1-2 pound melons with green flesh. Harvest when skin is netted and turning yellow. More tolerant of cool spring weather and drought than most melons. 75 days.



### Sakata Sweet Melon (*C. melo*)

A very popular Japanese melon. No bigger than a baseball. Smooth, thin rind can be eaten like a cucumber. Very sweet honeydew flavor. 6' vines are not very bushy, space close together. Plant extra as yields are modest. Harvest when rind turns white-ish with a pale yellow blush. Finicky to grow in Yakima. Not tolerant of cold spring weather or excessive summer heat! 85 days. Seeds donated by Phyllis Pugnetti.



## Watermelon (*C. lantanus*)

(*Citrullus lantanus*) includes watermelon and citron, but no other types of melons. Citron is similar to watermelon, but is not sweet and is used as a cooked food. It is believed that watermelon originated in Africa, where it has been cultivated for 5000 years. It spread to India and China, then into Europe with the Moor invasions. Watermelons are not cold tolerant, and are grown like all other melons. **Citron and watermelons will cross pollinate with each other, but will not cross with other (*C. melo*) varieties.**

### Sugar Baby (*C. lantanus*)

A productive watermelon that is perfect for small families, weighing in at only 6-10 pounds. The flesh is bright red, juicy and very sweet. Not cold tolerant! 80 days.



## Increase Melon Yields

Plant 30% more seedlings that you think you'll need. Start seeds indoors 4-8 weeks before transplanting. **Do not plant outside until the weather and soil remain consistently above 70°.** Increase visits by pollinators by planting blooming flowers or flowering cover crops among the vines. Buckwheat and agricultural mustard are particularly good for attracting pollinator insects.

## Squash

Squash, pumpkins, and zucchini are all botanically squash. Originating in South America, they are an ancient staple crop that is now found around the world. Squash requires warm weather, and warm fertile soil 65-75°. Varieties that take longer than 90 days to mature should be started indoors 4-6 weeks before planting outdoors. Most are not frost tolerant. All squash are from four *Cucurbita* species: *c. pepo*; *c. maxima*; *c. mochatata*; and *c. mixta* (newly named *c. agyrosperma*). All squash can cross pollinate only with other varieties from within the same species. To prevent cross pollination plant only one variety from each species in any growing season, or isolate and hand pollinate. All squash (summer or winter) needs to be very over ripe for seeds to be mature. Grow several plants to insure enough blossoms for good pollination. Adding blooming cover crops or other flowers to the squash patch will encourage pollinators and increase and fruit set. Summer squash are eaten at immaturity while still small and tender. Winter squash are eaten at maturity when the skin is hard. Withhold water during the last 2 weeks before harvest to increase storage longevity. Winter squahs should be stored at least a month before eating to allow sugars to fully develop. Many can be stored for 4-12 months in a dry, cool place at 60-65°.

## Squash (*C. pepo*)

Includes summer squash, zucchini, small pumpkins, and some small winter squash. Most (*c. pepo*) squashes can be harvested when very small and immature and used as the same as summer squash or zucchini. Will only cross pollinate with other (*c. pepo*) varieties.



**Acorn Table Queen** (*c. pepo*)  
Space saving bush variety, vines only 3' long. Glossy, dark green, ribbed 2 pound squash have thick pale orange flesh with excellent flavor. An All American Selections winner in 1974. 85 days.



**Cocozella di Napoli** (*c. pepo*)  
An Italian heirloom squash that gets very large, very quickly. Harvest while fruits are still small when blossoms are still attached, 4-10". Similar to Costata Romanesca but slightly smaller fruits and plants. 55 days.



**Costata Romanesca** (*c. pepo*)  
A rare Italian squash considered by many to have the best taste and texture of all zucchini. It is ribbed and green with lighter green stripes. Fruits get very large. Best harvested at about 12" while the blossom is still attached, but the flavor and texture remain very good up to 2'-3'. One of the few varieties that is good when dried. 60 days.

### Connecticut Field Pumpkin (*c. pepo*)

A New England heirloom. Possibly the oldest pumpkin shaped fruit in existence. The original Halloween pumpkin. Fruits weigh 15-20 pounds. Deep orange flesh. Excellent pie pumpkin. Good in fall décor. 100 days.



### Dark Green Zucchini (*c. pepo*)

Medium sized bushy plants. Productive, high yields. Fruits are very dark green, almost black. For best flavor and texture, harvest at 6-10". 55 days.



### Golden Zucchini (*c. pepo*)

There aren't many OP golden zucchini. Medium sized bushy plants. Good yields. Pick at 6-10", gold color is easy to see for harvest. 55 days. Seeds donated by Phyllis Pugnetti.



### Oregon Variety!

#### Honey Boat Delacata (*c. pepo*)

Bred at OSU. One of the sweetest squash varieties. Fruits weigh 1-3 pounds. Excellent for stuffing and pie. Can be picked very small as zucchini, or 3-4 weeks before maturity it tastes similar to starchy sweet potatoes, fully ripe the flesh is quite dry, creamy and sweet. 100 days.



### Long Pie Pumpkin (*c. pepo*)

Grown widely in Maine from the early 1800s. Looks like over grown 3-7 pound zucchini. Harvest after an orange spot appears near the ground. Flavor and color improve in storage. Listed in Ark of Taste. Excellent for pie. 95 days.



### Spaghetti Squash (*c. pepo*)

Introduced in 1934 in Japan. Very popular 3-5 pound squash with stringy flesh that is used as a vegetable spaghetti. 90 days



### Sugar Dumpling (*c. pepo*)

Small 1-2 pound green and cream striped fruits usually turning gold and cream after harvest. Orange flesh. Average yields. Vines are a little brittle, use care if trellising. Good stuffed and baked. 90 days.



### White Scallop Bush (*c. pepo*)

A favorite for centuries among natives of the Americas. Exported to Europe where it had gained widespread popularity by 1591. Called cymplings in colonial America it was the most popular vegetable. A bush variety that is still quite large. Best flavor when picked at 3" or smaller when fruits are still young and tender. 45 days.





### **Yellow Crookneck** (*c. pepo*)

A popular variety for its flavor and high yields. Harvest as yellow flesh deepens in color and fruit reaches about 7" to 8" in length. 50 days.

### **Jarrahdale** (*c. maxima*)

This stunning blue-green pumpkin comes from the town of Jarrahdale in New Zealand. Fruits weigh 8-10 pounds with thick, sweet, golden flesh and a small seed cavity. A long keeper, easily stores for a year. 100 days. Seed donated by Diana Pieti.



## **Squash (*C. maxima*)**

Includes mostly large squash like banana, marrow, hubbard, and buttercup. Most of these squashes will store 6-12 months. Will only cross pollinate with other (*c. maxima*) squashes.

### **Oregon Heirloom!**

#### **Oregon Homestead Sweet Meat**

(*c. maxima*) Endangered squash originally grown by Willamette Valley pioneers becoming a Pacific NW favorite for a century. Very sweet, thick flesh and small seed cavity. Blue-green fruits turn golden and develop sweetness in storage. Harvest right before frost. Heavy yields of 12-25 pound squash. Easily stores for a year. 100 days. Seed donated by Phyllis Pugnetti.



### **Boston Marrow** (*c. maxima*)

Endangered variety. First documented in 1831 in Buffalo NY when Native Americans distributed seed as they travelled. Its cold tolerance made it one of the most common varieties grown in North America for 150 years. Good for roasting, or pie. The large hollow seed cavity is good for stuffing. Listed in Ark of Taste. Heavy yields. Stores 6-8 months. 100 days.

### **Yakima Heirloom!**

#### **Yakima Marblehead** (*c. maxima*)

A true Yakima heirloom, very rare and endangered. Marblehead squash was introduced in 1857 in Marblehead MA and came across the country with pioneers, arriving in Yakima in 1896. Only two Marblehead varieties remain in existence. Grown commercially in the Yakima Valley until the 1950s. Sweet, dry-fleshed fruits are 10-18 pounds. Good stuffed, roasted or in pies. Blue-green fruits turn golden in storage. Easily stores a year. 100 days.



### **Burgess Buttercup** (*c. maxima*)

Buttercup was introduced in 1931. Burgess bush variety was introduced in 1952. Turban shaped fruits with a distinct button on the blossom end are 3-5 pounds with sweet orange flesh. 95 days.



### **Gete Okosomin** (*c. maxima*)

Very rare, endangered variety. Originating in Guatemala, it is not known how it got to Indiana where it was grown for perhaps 1000 years in the tribal gardens of the Myaamia. Very high yields of fruits 24-30" long and 15-25 pounds. Orange flesh, good for stuffing, pies and roasted. 95 days.

## **Squash (*C. mixta*)**

This species consists almost entirely of Cushaw squashes. Will only cross pollinate with other (*c. mixta*). This species has recently been renamed (*c. agryosperma*).



### **Golden Kobocho**

#### **AKA Orange Kobacha** (*c. maxima*)

A round squash that is flattened on top, weighing 3-8 pounds. Fruits may be green or golden-orange. Sweet creamy flesh is good baked or in pies. 90 days. Seeds donated by John Easterbrooks.

### **White Cushaw** (*c. mixta*)

A rare squash with white skin and sweet, golden flesh. Easy to grow, good yields of large 15-25 pound fruits. Good pest resistance and cold tolerance. Silvering pattern on leaves is normal and should not be mistaken for powdery mildew. A Southern heirloom introduced in 1891. Often called Mexican squash. Will store 3-6 months. 100 days.



## Squash (*C. mochata*)

This species consists mostly of fruits with a neck and seeds in the bulbous end like butternut, and also wheel shaped cheese squashes. Will only cross pollinate with other (*C. mochata*).



### Butternut (*C. mochata*)

All American Selections winner in 1970. This squash was used for many years in commercially canned pumpkin. Fruits are sweet, 4-5 pounds and have thick flesh with a small seed cavity. Stores 4-6 months. 95 days.



### Kogigu (*C. mochata*)

A small round Japanese squash, 1-3 pounds with very dry, sweet flesh that is similar to sweet potatoes. Leaves and fruits have a silvery pattern that is normal and should not be mistaken for mold or powdery mildew. Mild resistance to vine borers, and powdery mildew. Better used in savory dishes. Keeps 3-4 months. 95 days.



### Tromboncino (*C. mochata*)

This rare Italian heirloom can be used as either summer or winter squash. Harvest like zucchini when it is 4-10", green and immature. For winter squash, wait to harvest until the fruits are 3-4' long, turn tan, and the skin becomes hard. Tastes much like butternut squash. The neck is all edible flesh; the seeds are in the bulb. When allowed to sprawl on the ground the fruits will form loops; on a sturdy trellis fruits will be straight. Vigorous vines up to 15 feet. Resistant to pests and disease. Very high yields of 5-7 pound fruits. Will store 4-6 months. 60-90 days.

## Solanace

A large plant family made up of many species including: eggplant, peppers, tomatoes, tomatillos, and Solanum berries.

- Tomatoes rarely cross pollinate.
- Peppers and eggplant cross pollination in 20-30% blooms.
- Tomatillos and solanum berries will cross pollinate with other varieties but only within their own species—they also need at least 2 plants for good fruit set.

## Eggplant

(*Solanum melongena*) Eggplant originated in India or Asia over 2,500 years ago. The Moors brought it to Spain in the 8th century. Europeans thought it caused insanity and leprosy; so it took nearly 500 years to gradually become accepted as an edible. Today eggplant is eaten widely in Mediterranean cultures and is often eaten as a meat or pasta substitute. It is a warm weather crop that should be started indoors 8 weeks before transplanting in the garden. Plant seedlings about 2 feet apart, in full sun or light shade when the soil and night time temps are above 60°. Fruits are mature when they feel slightly soft. Immature fruits will be rock hard. Eggplant is attractive and works well in ornamental gardens and containers. To save for seed, fruits need to be very over mature. Leave ripe fruits on the plant for 4-5 extra weeks to allow seeds to fully mature. The fruit color should change to tan or brown, and have tough skin that has lost its shine. Eggplant can cross pollinate with all other eggplant varieties, but no other solanace crops. Grow only one variety each year or isolate by 500 feet between each different eggplant variety.

### Ping Tung

Beautiful purple, 12"-18" long, slender, mild flavored fruits that are not bitter. White flesh. Very high yields. 70 days.



### Rosita

This beautiful eggplant came to the US from Puerto Rico in 1979 and is gaining in popularity. Stunning magenta-lavender color with pear shaped 6-8" fruits. White flesh. Slightly sweet, mild flavor that won't turn bitter. Average yields. 85 days.



### Galaxy of Stars

A stunning new variety with high yields of small 3-4" fruits. The small size means they ripen about a month earlier than most other eggplants. Fruits mild flesh, Plants about 18-24" tall. 60 days



## Peppers

(*Capsicum annuum*) Peppers are native to South and Central America. Columbus named the plant 'pepper' because it tasted a little like black pepper which at the time was the same price per ounce as gold. Columbus introduced the plants to Spain where they quickly spread throughout Europe. The most common pepper species is (*C. annuum*) and includes most sweet and hot peppers. Peppers are frost tender and should be started indoors 8 weeks before transplanting. Peppers prefer warm weather, full sun, and moist, fertile soil that is 65° or warmer. All peppers can cross pollinate with other peppers, but not other Solanaceae crops. Genes for hot flavors are usually dominant. Peppers are self-pollinating but can also be pollinated by insects. For seed saving, grow only one variety of pepper each season or maintain an isolation distance of 500'. Seed should be saved from very mature fruits. The color will change from green to red, orange or yellow and fruits will become dull and slightly soft, but not moldy or rotten. Small hot peppers will dry on the plant. The seeds are ready at that time.

## Hot Peppers



### Cayenne Long Red

Plants are 2' tall, very vigorous and productive. Mature peppers are long slender, bright red, and very hot! Heavy yields make plants top heavy, may need staking or caging. 75 days.



### Habanero

Small, bright orange peppers are very hot! Water only when soil is dry to prevent bitterness. Plants are 2'-3' tall. 75 days.



### Jalapeno

Plants are 2' tall, very vigorous and productive. Peppers are often eaten green, but turn red at maturity. Mild heat. Heavy yields make plants top heavy, benefit from staking or caging. 75 days.



### Red Hot Chili

Fruit ripens from green to yellow, orange, and finally red. Medium hot fruits are 2" long and held upright above the foliage. Very ornamental. Plants are 18" tall. Grow well in containers. 80 days.



### Shishito

Usually mildly sweet but 10-20% will be mildly hot. Often used green for frying or pickling (a good substitute for peperoncini) Peppers turn red when mature. Plants are 24" tall with fruits that are 3-4" long. 55 days.

## Sweet Peppers

### Antohi Romanian

Named for Jan Antohi, a Romanian acrobat, who defected and became a US citizen. His mother sent some of her heirloom pepper seeds with him. He donated seed to Seed Savers Exchange, but they are still very hard to find. Very heavy yields of 3-4" cone shaped, sweet peppers with thick walls. 50 days to yellow, 75 days to red.



### California Wonder

An old time variety, introduced in 1928 and set the standard for bell peppers for decades. Blocky 4" mild flavored peppers. Good yields. Most commonly used as a green pepper but turns red and sweet when fully mature. 50-75 days.



### Chinese Giant Sweet Red

A true American heirloom, introduced by Burpee in 1900 as the first truly giant bell pepper twice as big as any other at the time. High yields of huge, blocky 4"-5", sweet, thick-walled, bright red peppers. A real beauty. Excellent flavor. 80 days. Seed donated by Phyllis Pugnetti.



### Etiuda

Rare outside Eastern Europe, originally from Poland. Blocky, thick-walled, very sweet pepper. High yields of beautiful bright orange peppers. 75 days.



### King of the North

Introduced in NY in 1934. Short-season blocky fruits are nicely flavored when picked green or red. Similar to California Wonder but more vigorous in northern areas. More tolerant to both cool and hot weather than most peppers. 70 days.



### Purple Bell

A purple beauty! A large blocky, thick walled pepper that starts out green, then turns a dark purple, gradually fading to brown, orange, and finally red. Can be eaten at any color. Sturdy, compact plants. High yields. 75 days.



### Sweet Banana

Very productive plants 24" tall. Mild yellow peppers are 6" long and slender turning bright red at maturity. An All American Selections Bronze Medal winner in 1941. Very ornamental. Heavy yields. 75 days.



## Solanum Berries

These are not true berries but are related to tomatoes, peppers and eggplant. The plants are attractive and look a bit like large pepper or tomatillo plants with clusters of small blossoms and colorful berries. Some have an upright growing pattern and others grow laterally along the ground. All require growing conditions similar to tomatoes. Seeds can be difficult to start. They are small and need to be sown on the surface or with a light dusting of soil over the seeds. They need warm, moist soil and can take 2-3 weeks to germinate. They grow slowly until the weather remains consistently above 80°. Each type of Solanum berry will only cross pollinate within its own species.

**Most varieties need 2 or more plants for good fruit set.**



### Aunt Molly's Ground Cherries

(*Physalis peruviana*) A Polish heirloom that is sweet and tart without the savory flavor of tomatoes. Fruits are the size of small cherries inside papery husks. Plant grows laterally along the ground. Likes full sun with consistent moisture. Fruits in the husks will drop to the ground when ripe. Grows well in containers. Tastes very mild and slightly tropical. Excellent raw and in pie, cobbler, and preserves. 65 days.



### Cameroon Huckleberries

(*Solanum scabrum*) Very similar to Garden Huckleberries except plants are a little smaller with a sturdy V-shaped growth habit, and slightly larger berries that can be eaten like Garden Huckleberries. In Cameroon it's primarily eaten for the baby leaves in Njama Njama, a stir fry dish. Raw berries have a bitter metallic taste. Need to be cooked with sugar and lemon. Seed donated by Grace Neba Fobi, a Yakima Master Gardener and Cameroonian immigrant.



### Garden Huckleberries

(*Solanum scabrum*) Plants have clusters of 6-8 small white flowers all along the vines that develop into clusters of shiny, dark purple berries. Harvest the whole plant right before the first hard frost. Cooked berries taste a bit like Concorde grapes combined with blueberries. Must be cooked with lemon and sugar to develop flavor. Good in pies and jam. Yields 3-5 pounds per plant. Plants are 30" tall and do well in containers. Raw berries have an unpleasant bitter metallic taste.



### Golden Berries AKA Cape Gooseberry

(*Physalis peruviana*) Plant has soft fuzzy foliage and very tall upright growth to about 8' tall and 2'-3' wide. Tastes something like tart green apples and sweet pineapple. Excellent raw, in pie, cobbler, and jam, but dried and eaten as a snack is the most common use. Seed donated by Naomi Wenzel.

## Sweetest Tomatoes

Some of the sweetest and most flavorful tomatoes have green shoulders, a trait where the fruit ripens from the bottom to the top with the shoulders being the last part to change color. About 80% of the sugar in tomatoes is developed in the leaves and later transported to the fruit. Green shoulders on the fruits develop sugar in the same way as the leaves. So even if the fruit is picked before it is fully ripe, the green shoulders continue to develop sugar and flavor within the fruit. Other tomatoes can be picked green and will develop nice color; but they won't develop any more sugar or flavor.

All tomatoes used to have this trait, but a mutation in the 1950's allowed for tomatoes to ripen evenly, a trait most shoppers find more desirable. Today, nearly all hybrid tomatoes have the gene for even ripening. Just one of the many reasons that home grown may taste better.



Tomatoes with green shoulders (above) and those that ripen evenly (below).



# Tomatoes

(*Lycopersicon lycopersicum*) An ancient Solanace crop native to South America and introduced into Europe in the 1600s. Tomatoes did not gain widespread popularity until the 1800s with the invention of pizza. Tomatoes are a warm weather crop that will not thrive in cold or hot temperatures. Plant indoors 6-8 weeks before last frost date. Transplant outdoors when soil temps are 60-70°. Plants thrive and set fruit when air temps are between 65-85°. Most tomato plants will not survive when soil is consistently colder than 50°, and will not set fruit when air temp is consistently over 90°. **Determinant, semi-determinant, and indeterminate** refer to the growth habits of the plant foliage, not fruit size. It is not a scientific designation but is used by gardeners and farmers to indicate how much growing space the plant needs.

Tomatoes are self-pollinating and do not benefit from insect visits. They will only cross pollinate with other tomatoes, but that is uncommon, so no measures are needed to prevent cross pollination unless absolute purity of a variety is important to you. Tomatoes cannot cross with other Solanace crops.

## Determinant Tomatoes

**Determinant (det)** is a recessive trait found in only 10% of tomatoes. Small plants with short vines, 2'-4' tall, that do not need to be pruned, except to remove branches that touch the ground to prevent soil borne disease. Often labeled as bush or patio tomatoes, these grow well in containers and small gardens.



### Clear Pink Early (det.)

A Russian heirloom with long trusses of 4-6 ounce tomatoes. Fruits are a good combination of sweet and tart. High yields for such a small plant, only 30" tall, grows well in containers. 60 days.



### Heintz 9129 (det.)

Average yields on small plants, only 24-30" tall, good in containers. Developed for commercial uses at a Heintz Company breeding station. Taste and texture are similar to a commercial processing tomato. Tough skin and flesh, holds up for canning chunky sauces and salsas. 5-8 ounce fruits. 75 days.

### Oregon Variety!

#### Karen's Orange AKA Orange King (det.)

Rare. Very high yields of 6-8 ounce fruits on a small plant, 24-30" tall. Sweet, juicy, low acid, beautiful orange color. Sets fruit in both hot and cool weather. This variety was bred OSU under the name, Orange King. There are several different varieties named Orange King, to prevent confusion we unofficially renamed this variety Karen's Orange after a retired Yakima teacher and Master Gardener. 65 days.



### Roma Mini

Compact 2' plants, with small 2 ounce paste type fruits, meaty, few seeds. Good for sundried. Yields are only average and plants are small so they don't produce enough for canning large amounts of sauce. 70 days.



### Washington Variety!

#### Royal Shrouded Mystery (det.)

We named this because it came in a mismarked packet. It may possibly be a Blue Green Zebra bred by Tom Wagner of Everett. Compact 2' plants have 4 ounce green striped fruits with indigo shoulders. Awarded *Most Beautiful Tomato* at Tomatofest in 2018. 75 days.



### Silver Fir Tree (det.)

Very early 3-4 ounce tomatoes on 18" bushes. Wispy foliage almost looks like carrot tops. Each plant sets 12-18 fruits. Excellent for small gardens and containers. Average flavor. 54 days. Seeds donated by Phyllis Pugnetti.



### Sophie's Choice (det.)

Good flavor for such an early variety. High yields of 4 ounce red fruits on 2' tall plants. Leaves normal habit is to curl in heat, and should not be confused with leaf curl virus. May benefit from afternoon shade. Good in containers. 54 days.



### Taxi (det.)

A very early yellow tomato. High yields of very mild flavored 4 ounce fruits on 2' tall plants. Leaves normal habit is to curl in heat, and should not be confused with leaf curl virus. May benefit from afternoon shade. Good in containers. 58 days.



## Semi-determinant Tomatoes

**Semi-determinant (s-det)** are in all respects like determinate except that they grow to 5'-8' tall and need to be staked or trellised or need room to sprawl on the ground. May benefit from judicious pruning to allow better access for harvest.

### Ace 55 Bush (s-det.)

Excellent for slicing and salads. A low-acid fruit that produces good yields of 6-10 ounce sweet, mild fruits. Low-acid tomatoes cannot be safely canned in an open water bath. Plants are 4'-6' tall. 75 days.





### **Beliy Nalive** (s-det.)

A Russian heirloom the name means red apple. Early, 3-4 ounce red fruits. Not prone to sunscald. Good flavor for such an early variety. Plants grow 4 feet tall. 55 days.

### **Yakima Variety!**

#### **Yakima Wonder** (s-det.)

These came in a mismarked packet. Wondering what it was, inspired the name, *Yakima Wonder*. Plants are 4'-5' tall, with potato leaves, and heavy yields of attractive 8-12 ounce fruits. Some cold tolerance in fall. Traditional red tomato flavor. 75 days.



### **Black Sea Man** (s-det.)

Rare Russian heirloom from the Black Sea area. Prefers less water than most varieties. Dense canopy of potato leaves prevents sunscald. Plants are 8' tall, benefits from pruning and staking. Very high yields of 8-12 ounce fruits. At maturity the color is a deep burgundy with olive green shoulders. Fruit is very juicy with intense flavors of savory, smoky, sweet, and tart. Awarded *Best Tasting Tomato* at 2016 and 2019 Tomatofest. 70 days.



## **Indeterminant Tomatoes**

**Indeterminant (ind.)** have long vines, 10-15 feet. They set fruit all season and usually benefit from pruning. Need very sturdy trellising, or allow to sprawl on the ground. About 90% of tomatoes are indeterminate which is a genetically dominant trait.

### **Italian Heirloom** (s-det.)

An old heirloom. Very high yields of 10-16 ounce fruits. Some fruits are round, most are slightly pear shaped. Excellent flavor with a good balance of sweet, tart. Few seeds. Juice is in the flesh so it doesn't leak out when sliced, making it good for sandwiches and sauces. Vines 8' tall. Does not like to be pruned. 75 days. Seed donated by Phyllis Pugnetti.



### **Amana** (ind.)

A 1984 heirloom bred by Gary Haley, an employee of Amana Appliance Company located near the historic the German Amana Colonies in Iowa. Sweet, low acid beefsteak tomatoes with few seeds. Fruits weigh 1-2 pounds. Very bright orange. Hardy and prolific. Not prone to cracking. Good slicer and in sauces. 80 days.



### **Mushroom Basket** (s-det.)

A rare Russian heirloom. Large 8-14 ounce purple tomatoes with ruffled edges, meaty interior and few seeds. Attractive hollowed out and used as a bowl for salads, also good for sauces. Plants are 6-7' tall, need staking due to weight of fruits. Moderate yields. This variety was awarded *Most Beautiful Tomato* at Tomatofest 2016. 75 days. Seed donated by Pat Moszeter.



### **Azoychka** (ind.)

Very rare. Bred by a Russian hobby gardener. Beautiful bright lemon yellow, early tomato with 5-8 ounce fruits. High yields. A good balance of sweet and tart especially for a yellow variety. Selected by Tomato Growers Supply as the *2013 Tomato of the Year*. For best flavor, harvest before yellow color turns golden. 65 days.



### **Sioux** (s-det.)

Bred in Nebraska and introduced in 1944. A vigorously vining plant grows 8 feet tall. Needs some pruning or it is difficult to harvest. Reliably high yields even in hot weather. Somewhat drought tolerant. Red 6 ounce fruits have a balanced flavor of sweet, tart, and savory. 70 days.



### **Dagma's Perfection** (ind.)

Unique for it's bi-color pastel yellow with a pink blush, and pink marbling. Similar to a Pineapple tomato, except the one pound fruits are smaller however they ripen 3 weeks earlier. Long vines need plenty of space or sturdy staking. Mild and fruity. 72 days.



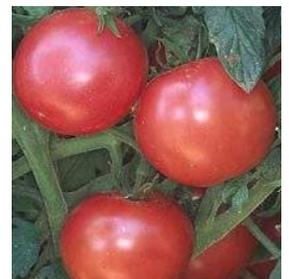
### **Sweet Israeli** (s-det.)

Bred for commercial uses in the hot, dry climate of Israel, has firm skin and flesh. Red 5-8 ounce tomatoes, moderate yields. Performs well during hot weather when others fail. Grows 6'-8' tall with wispy foliage. Not prone to sunscald. 75 days.



### **Eva Purple Ball** (ind.)

A pink tomato from the Black Forest brought to the US by German immigrants in the early 1800s. Fruits are juicy with a mild flavor, neither too sweet or tart. The plants are very vigorous, with average yields of 5-6 ounce fruits. Somewhat disease resistant. 70 days.





**Ellensburg Heirloom!**  
**Gloria's AKA Glorious** (ind.)  
 A very large plant with one pound golden fruits. Ripens early for such a large tomato and continues to ripen until frost. Very few seeds. Juice is in the flesh so it doesn't leak out when sliced, making it good for sandwiches and sauces. 72 days. Seeds donated by Gloria Wright who grew, selected, and adapted this variety in Ellensburg.



**Jubilee** (ind.)  
 First introduced in 1943 as an All-America Selection winner. The fruits are 6-10 ounces with very meaty, thick-walled interiors, mild flavor and few seeds. High yields. 75 days.



**Large Red Oxheart** (ind.)  
 A Russian large red heart-shaped tomato, 8-16 ounce fruits. Plants are slow to germinate and grow. But once they get going they are very vigorous! Fruit continues to ripen very well even in cool fall weather. Tolerates light fall frost. The largest and latest tomato in our 2015 garden. A good variety to extend the season. Heavy fall yields. 85 days.



**Opalka** (ind.)  
 A rare Polish heirloom brought to NY by the Opalka family in the early 1900s. Average yields of 5" long horn shaped, red paste tomatoes that look more like red peppers than tomatoes. Meaty fruits have few seeds. Sweeter than most paste tomatoes. Good in sauces and sun dried. 80 days.



**Prudens Purple** (ind.)  
 A stunning purple-red tomato with great flavor similar to Brandywine, sets fruit earlier, with much higher yields. Disease resistant. Very sturdy, aggressive, long vines of 15 feet or more with beautiful fruits that weigh 1-2 pounds. Not prone to cracking or catfacing. If you have room for very large plants these are worth bragging about. 72 days.

**Solar Flair** (ind.)  
 Consistently a very beautiful and productive 5-8 ounce tomato. The outside has yellow, green, orange and red striations that look like the Aurora Borealis. Inside is solid red, juicy with a balance of sweet and slightly tart flavors. Has dense leaf canopy and sturdy branches. Good yields. 75 days.



**Stump of the World AKA Big Ben** (ind.)  
 Originally bred by Ben Quisenberry a hobby gardener from Ohio. Named Stump of the World after a biblical passage. Very similar to Prudens Purple, but with shorter vines, smaller fruits, and somewhat lower yields. 78 days.



**Sungella** (ind.)  
 Orange fruits grow like cherry tomatoes in long clusters of 8-10 fruits that are golf ball size, about 3 ounces, which makes them larger than most cherry tomatoes, but a perfect salad tomato. Especially good in dry, low-water conditions. Fruits will crack when over watered. Very high yields! 70 days.



**Washington Variety!**  
**Wagner Blue Green** (ind.)  
 A new variety by hobby gardener, Tom Wagner in Everett WA. Fruits are about 4 ounces. Color is green with deep indigo shoulders, gradually ripening to golden-yellow with a blush of indigo remaining. The flesh is a surprising blue-green color. Fruits are tart if picked while the color is still chartreuse, and sweet when color has turned golden-yellow. 80 days.



## Return Seeds to the Library

You can drop off or mail to WSU Extension office, Monday-Friday 9:00-12:00 and 1:00-4:00 or drop off Thursday mornings 8:00-9:30 Heirloom Garden, 1522 South 18th Avenue in Yakima, at the same location as the Master Gardeners Greenhouses.

Return seeds: Master Gardeners  
 WSU Extension Office  
 2403 S 18th, Suite #100,  
 Union Gap

# Cherry Tomatoes



**Black Cherry** (ind.)  
The dark purple color and complex flavors make this one of the most popular cherry varieties. Big clusters of large fruits of high yields right up to frost. Resistant to cracking and holds on the vine well. Plant is a vigorous grower that benefits from pruning and can be topped. 70 days.



**Black Vernissage AKA Vernisazh Chernyi** (ind.)  
A Ukrainian variety with beautiful burgundy and olive green striated, large cherry tomatoes, 2 ounces or bigger. The skin is firm and less prone to cracking as long as you don't over water. Has a savory, peppery flavor. 72 days.



**Brown Berry** (ind.)  
A red cherry tomato with a slightly mahogany color. Big clusters of large of fruit. Rich flavor of semi-sweet, slightly acid fruits. High yields. Resist to cracking and hold on the vine well. Plant is a vigorous grower that benefits from pruning and can be topped. 72days.



**Washington Variety! Dark Orange Muscat** (ind.)  
A variety bred by hobby gardener, Tom Wagner in Everett WA that came to us by way of Ireland! A pretty orange cherry tomato with slightly olive-green shoulders (some claim they are bronze). Fruits grow in very long clusters of 10-12 tomatoes and have a good tomato flavor without being overly sweet or tart. 75 days.



**Gardener's Delight AKA Sugar Lump** (ind.) German heirloom of large red cherry tomatoes with clusters of 6-10 sweet fruits. Crack resistant. High yields. 65 days.



**Oregon Variety! Green Tiger** (ind.)  
A new variety with green and yellow striations, 2 ounce, bullet shaped fruits that are very sweet and juicy. Firm skin makes it resistant to cracking as long as you don't overwater. Very high yields. 70 days.

**Jackie** (ind.)  
A red cherry with indigo shoulders. There is some variation in size and shape of individual fruits. Fruits that get the most sun have the darkest indigo shoulders. 68 days



**Large Red Cherry** (ind.)  
Introduced in the 1980s by hobby gardener Ben Quisinberry. A one bite cherry tomato that is larger than most at 1 ½ ounces. Plants are large, with dark foliage, and prolific clusters of fruits. 72 days.



**Yakima Variety! Yakima Juicy Plum** (ind.)  
We have no clue as to the true name of this variety. The seeds came in a mismarked packet, so we provided the name. The plants were loaded with juicy, sweet and savory, two-bite sized, plum shaped fruits, red with green shoulders. Perfect size for salad and sundried. 70 days.



**Yellow Pear** (ind.)  
An old variety, dates to 1700's, originally from Europe. Fruits are bright yellow with a narrow neck, mildly sweet and low acid. Fruits are 1-2 ounces. Very large vigorous plants, benefit from pruning and trellising. High yields. 75 days.



**Yellow Plum** (ind.)  
A bright yellow 1½-2 ounce plum shaped fruit with a good balance of flavor that is slightly sweeter and more tart than Yellow Pear. Also less likely to drop off the vine than Yellow Pear. High yields. 70 days.



## Need a Paste Tomato?

Paste tomatoes come in all shapes and colors. If you want sauce tomatoes try: **Italian Heirloom, Gloria's, Amana, Olpaka, or Mushroom Basket.**

## Tomatillos

(*Physalis philadelphica*) are green tomatillos. Purple tomatillos are (*Physalis ixocarpa*). The two species do not cross pollinate. Tomatillo plants look like large peppers and the fruits look like tomatoes in a husk. Small seeds are slow to germinate and need consistently warm moist soil. Plants need warm soil and weather to grow well, 70° or warmer. Some varieties are out breeding which is unusual for Solanace crops. For good fruit set grow at least 2 plants and assure adequate visits from pollinator insects.

Tomatillos are native to Central America and Mexico. They were introduced into the US in 1863. By the mid-1900s they had spread throughout much of the world. They are a very ancient plant. In 2017 a fossilized wild tomatillo was found in Argentina that dated to 52 million years.



### Green Giant AKA Gigante Verde

(*Physalis philadelphica*) One of the largest tomatillos. Good yields of 4 ounce fruits on 2-3' plants. Sweeter than most tomatillos. Thick papery husk is easy to remove from the fruits. Start 8-10 weeks before transplanting. 100 days. Seeds donated by Phyllis Pugnetti.

## Okra

(*Hibiscus esculentus* renamed *Abelmoschus esculentus*) Okra is related to hibiscus, has beautiful flowers and pods, and is often grown ornamentally. It probably originated in Ethiopia and spread to Europe with the Moors, then came to the Americas with African slaves. Okra seeds are often pressed into oil or dried and ground into a coffee substitute. Okra is a tropical plant and should be started indoors about 8-10 weeks before planting into the garden. Okra grows very slowly and suffers insect damage when the soil and weather are cool, but grows rapidly in the heat and thrives when the temps soar into the 90s. In Yakima, plant into the garden around the first to the middle of June. Plant 12" 12" apart in very fertile, well drained soil, in full sun. Pods should be harvested at about 3-4" before they become tough and fibrous. To save seed, pods should be fully mature 7"-10" long, dry, and brittle.



### Clear Clemson Superb

Green pods and foliage. One of the most popular varieties. Seed donated by Ferry-Morse Company. No additional information was available on their seed packet or website.



### Red Burgundy

Deep red stems and pods, with large showy blooms of creamy white or pale yellow. A beautiful plant. Grows very quickly once the weather remains consistently above 85°. Harvest small pods often to keep productivity high. Needs 55 days of hot weather. Original seed donated by Monticello.

## Herbs

Some of the easiest plants to grow are herbs. They are very undemanding, and attractive. Herbs grow well, even in less than desirable conditions, including poor soil and low water. Although lovely in bloom, herbs can be aggressive re-seeders. When the plants start to bloom, you should either cut the flowers and foliage way back or cover the blooms with a seed bag to catch the seeds before they spread throughout your yard and garden.

When you use fresh herbs regularly in cooking, you will be in your herb garden more often, so you can keep a close eye on their growing habits. Planting herbs near your kitchen makes them convenient to use and easier to control aggressive or invasive traits.



A small herb garden with oregano, rosemary, thyme, chives, curly parsley, and basil.

Some herbs like mint should be grown with great caution! They can spread from seed, from the roots, and will also sprout roots from small bits of the stems. Mint is best grown in containers that sit on concrete or other hardscape and are well away from in-ground soil.

Of all plants in the garden, herbs have the highest return on your dollar investment. They cost little, most grow from seed, many are perennial growing for many years before they need to be replaced, and are easy to use fresh, frozen, or dried. Once you grow and use fresh herbs you'll wonder how you ever got along with out having them in your garden.

# Herbs



## Basil—Genovese

(*Ocimum basilicum*)

A classic basil, mildly spicy with a sweet fragrance that is easily recognized by cooks and gardeners alike. To keep plants bushy and growing all season, harvest near the bottom of a stem by cutting immediately above a leaf node. Warm weather, full sun or dappled shade.



## Basil—Lemon

(*Ocimum basilicum*)

An aromatic herb used mostly for its sweet lemony fragrance, especially good in potpourri. Also used for cooking in curry, chicken, and fish. To keep plants bushy and growing all season, harvest near the bottom of a stem by cutting immediately above a leaf node. Warm weather, full sun or dappled shade.



## Basil—Thai

(*Ocimum basilicum*) Native to Southeast Asia. Has a strong clove scent and anise flavor. Attractive purple stems and edible flowers. 1997 All American Selection winner. To keep plants bushy, and growing all season, harvest near the bottom of a stem, cutting immediately above a leaf node. Warm weather, full sun or dappled shade.



## Yakima Variety!

**Basil—Yakima Jewel**

(*Ocimum basilicum*) A beautiful basil that looks great planted among flowers. Has an anise flavor similar to a mild Thai basil. A wide range of speckled and striated green and purple colors. Original Opal basil seeds from supplier may have been unstable. Seeds donated by Phyllis Pugnetti.



## Cilantro/Coriander

(*Coriandrum sativum*) Biennial. Leaves

are cilantro and seeds are coriander. Grows in cool weather. Best when planted in late summer and grown thru the fall. When grown in a sheltered area with heavy mulch, cilantro may grow all winter, producing a spring crop of leaves, then bolt and flower, finally setting seed. When the plant bolts, the leaves will appear fernlike and develop an unpleasant soapy flavor.

## Dill—Bouquet

(*Anethum graveolens*) Early to flower with large seed heads. Fronds are used by cooks as dill weed, seeds are culinary dill seed, fresh flowers are also edible. Attractive in ornamental beds. Dill is a vigorous re-seeder. Full sun.



## Dill—Vivian's Huge

(*Anethum graveolens*) This unknown dill variety came up as a volunteer growing over 5 feet tall. Grow like Bouquet Dill, listed above. Seed donated by Vivian Hunt.

## Lemon Balm

(*Melissa officinalis*) Native to the Europe and Asia. Leaves have a fresh citrus aroma. A non-invasive mint that spreads only by seeds. Cut back often to prevent flowering and to keep the plant bushy and healthy. Needs well drained soil, dappled or afternoon shade.



## Lovage

(*Levisticum officinalis*) A perennial plant that can grow to 6' tall and 4' across. Plant in a large container to maintain a 2'x2' size. Prefers afternoon shade, but tolerates full sun, and full shade. An aggressive re-seeder. Harvest before bloom. Leaves and seeds have a strong celery flavor. Stalks are too fibrous to eat. Use fresh or dried. Original plant donated by Fred Staloch.



## Oregano

(*Origanum vulgare*) Native to the Mediterranean, prefers hot, dry climates. Grows well in pots. Harvest before bloom. Strong flavor is preferred by many cooks. Aggressive re-seeder. Perennial. Full sun.



## Parsley—Italian

(*Petroselinum crispum*) Biennial. A flat leaf parsley preferred for cooking. A biennial that grows leaves and roots the first year, flowers and seeds the second. Leaves, flowers and roots are edible. Becomes bitter after bloom. Re-seeds easily in the second year. Full sun, tolerates part shade.



# Flowers



## Cardoon

An attractive warm weather thistle like plant grows to 5' tall with large purple blooms. Start inside 6 weeks before transplanting. Plant outside 3-4 weeks after the last frost when soil and night temps are warm. Cardoon is edible but is more often grown as an ornamental. Full sun.



## Columbine—Rose

Full sun or part shade. Compact mounding foliage with blooms above foliage. Tolerates poor soil. Attracts hummingbirds. 12"-18" tall. Seeds need sunlight to sprout, do not cover with soil. Takes 15-30 days to sprout. **Seeds need 3-4 week vernalization.**



## Coneflower—Purple

Large full-headed flowers topped with golden-tipped cones. Slow growth the first year. Drought tolerant. Divide every 3-4 years. Hardy, full sun. 18"-24" tall. Seeds need sunlight to sprout, cover with 1/8" soil after germination. **Seeds need 10-12 weeks of moist vernalization. Easiest to plant seeds in late fall and let winter over.**



## Coreopsis—Early Sunrise

Easy to grow. Compact mounding growth habit. Prefers unamended soil, heat, and full sun. Deadhead to keep plants blooming and reduce aggressive re-seeding. 12"-18" tall.



## Cosmos—Orange

Free flowering, open lacy foliage gives an airy touch to the garden from mid-summer to frost. Good filler in the back of the garden or plant among zucchini and squash to bring in pollinators. Grows best in full sun. Tolerates poor soil, heat, and humidity. 30-36" tall.



## Hollyhock—Mars Magic

A biennial that grows a small rosette of leaves in the first year, sending up a 4'-6' flower stalk the second year. Blooms are single blossom, trumpet shaped, bright cherry red. Readily re-seeds.

## Love in a Puff

Also known as Balloon Vine Plant. A warm weather tropical vine grows 3-6 feet. Vines are not aggressive; looks good on a mailbox or fence post. Has small white flowers followed by papery lantern like pods with small round black seeds each having a white spot in the shape of a heart. Great for gifts.



## Marigold—French

One of the most common marigolds. Multi-colored yellow, orange, and red. Compact bushy plants, about 12" tall. Plant in full sun, 12 inches apart. Plants are often wider than they are tall. Pest resistant. 12" tall.



## Salvia—Purple

## Salvia—Rose

A perennial with a 12-16" mounding habit with upright stems and flower spikes. Often mistaken for lavender. Dies to the ground each winter. Regrows from roots, re-seeds easily. Drought tolerant, pest resistant. Attracts hummingbirds, butterflies, and pollinators. Purple is a dark blue-purple. Rose color is actually a bright magenta.



## Snapdragons—Crimson

Sturdy spiky flower stalks, 18-24" tall, don't usually need staking. Long blooming. Easy care. Dead head for continuous blooms. Will re-seed and grow back each year, but not aggressively. Sprinkle seeds over soil in late fall or early spring. Seeds will germinate when soil warms. **Seeds need sunlight to germinate. Do not cover with soil.**



## Zinnia—Mix Colors

Tall plants are loaded with 2-3 inch multi-colored blooms that persist for a long time. Very attractive anywhere you want a splash of color. A good choice for new beds while you wait for perennials to fill in. Thrive in hot weather. Easy to grow from seed. Sow after all danger of frost. 24-36" tall.



# Cover Crops

Cover crops are good for the soil. They loosen and lighten heavy soils; prevent erosion; increase water holding capacity; moderate soil temperature; and also bring in pollinators, predators, and decomposers. It requires discipline to give up 10-25% of your garden's growing space in order to grow cover crops; but taking care of the soil always pays off in the long run with higher yields, fewer pests, and reduces other garden problems. Each package will seed approximately 100 square feet.



## **Agricultural Mustard** (*Sinapis alba*)

Easy to grow. Rapid, dense growth chokes out weeds and shades soil. Wispy upright stems that hold edible blooms above foliage. Sow seed over the surface of the soil and gently tamp in to make good contact with soil. Full sun or part shade. Rapid germination at 65-85°. Tolerates poor soil. Somewhat drought tolerant. Will not tolerate waterlogged soil. Flowers appear in 4-6 weeks, seeds form about 4 weeks later. Mustard re-seeds easily. Cut or pull plants after blossom but before seed set. Top growth may be used as mulch or turned into the soil. Excellent cover crop for cucurbits to attract pollinator and predator insects which may improve yields, may have some mild beneficial effect on soil pests. Very shallow roots. 18-24" tall. Leaves and blooms are also edible.



## **Buckwheat** (*Fagopyrum esculentum*)

A warm season grain crop often used to attract pollinator and beneficial insects. Rapid, dense growth chokes out weeds and shades soil. Grows in a wide range of conditions, but prefers daytime temperatures around 60-75° and slightly cooler nights. Seeds sprout in 3-5 days, blooms at 6 weeks, seeds begin to set at 8 weeks. Will re-seed but not aggressively. Plants should be cut or pulled after blossom but before seed set. Very shallow root system. Does not grow well in heavy soils. Use top growth as mulch or turn into the soil. Excellent companion crop for cucurbits and brassicas to attract pollinator and predator insects which may improve yields. For a grain crop, sow 12-14 weeks before fall frost. Not cold hardy! 12-18" tall.



## **Cowpeas AKA Black Eyed Peas** (*Vigna unguiculata*)

This legume is an Asian long beans. Requires warm days when soil temps are consistently above 65°. Very heat tolerant. Avoid water logged soil. Plant 1" deep and 4" apart. When grown as a cover crop to increase nitrogen in the soil, harvest when plants are in bloom but before pods develop. Nitrogen nodules develop along the roots. Leave roots in the soil as nodules decompose they release nitrogen. Use top mass as mulch or compost. Do not grow in the same soil more often than every 4 years. Pods and dried beans are edible.



## **Daikon Radish** (*Raphanus sativus*)

This edible Asian radish is tender but hot, used for pickling and stir fry. Planting in early spring will produce hot woody unpalatable roots. Should be planted in mid July for culinary uses and cover crops. Often used as a 'bio drill' to loosen clay and break up compacted soils. Roots grow 1'-3' deep, drilling holes and filling them with nitrogen rich roots that decompose quickly, feeding the soil microbes. Leaves grow to 2 feet long. Leaves and roots make excellent fall and winter mulch and should be left in the garden through the winter. Temps of 20° will winter kill. Plant 1/2" deep, 6" apart, in July for cover crop. For seed saving, plant in spring.



## **Sunn Hemp** (*Crotalaria juncea* L.)

A tall, fast growing tropical legume that requires very warm weather. Grown for its abundant biomass both above and below the ground. Used to loosen heavy soil and add organic matter. A legume that converts air-borne nitrogen into nodules along the plant roots. Leave roots in the soil to release nitrogen slowly into the soil as roots decompose. Plant 1" deep in full sun when soil temps are consistently 70° or warmer. When plants begin to flower, cut stalks at the ground, before they become woody. Will not set seed outside the tropics. Makes excellent mulch and compost. Will not set seed in North America. Grows to 6' tall.



## **Winter Mix —Rye, Vetch, and Tiller Radish**

Rye grows large amounts of biomass both above and below the soil, breaking up heavy soil and providing carbon to the soil. Vetch is a legume that adds substantial nitrogen to the soil. Fodder radishes grow up to 3' deep and act as a bio-drill to break up heavy soil, scavenge nutrients from deep in the soil, provide soil cover to reduce winter erosion, and release nitrogen as the radishes decompose. Plant in late July and leave all winter. Will winter kill during very cold winters. In mild winters, this crop will over winter and grow again in spring. Cut through the crown of plants to kill or wait for hot summer weather to kill this cool weather cover crop. Even when the leaf canopy is only 12" the root mass will be substantial to a depth of 2 feet. A good cover crop for heavy or unproductive soil, in new garden beds.

# Air and Soil Temperature Chart

Vegetable Crop		Air Temperatures Degrees F		Soil Temperature Degrees F	
<i>Plant</i>	<i>Season</i>	<i>Range</i>	<i>Optimum</i>	<i>Optimum</i>	<i>Range</i>
Beet	Cool	40 - 75	60 - 65	85	
Beans	Warm	50 - 80	60 - 70	80	60 - 85
Broccoli	Cool	40 - 75	60 - 65		
Brussels Sprouts	Cool	40 - 75	60 - 65	75	40 - 80
Cabbage	Cool	40 - 75	60 - 65	85	45 - 95
Cabbage Chinese	Cool	45 - 75	60 - 65	80	45 - 85
Carrot	Cool	45 - 75	60 - 65	80	45 - 85
Cauliflower	Cool	45 - 75	60 - 65	80	45 - 85
Celeriac	Cool	45 - 75	60 - 65	70	60 - 70
Celery	Cool	45 - 75	60 - 65	70	60 - 70
Chard	Cool	40 - 75	60 - 65	85	50 - 85
Chive	Cool	45 - 85	55 - 75		
Collard	Cool	40 - 75	60 - 65	85	45 - 95
Corn	Warm	50 - 95	60 - 75	95	60 - 95
Cucumber	Warm	60 - 90	65 - 75	95	60 - 95
Eggplant	Hot	65 - 95	70 - 85	85	75 - 95
Endive	Cool	45 - 75	60 - 65	75	40 - 85
Fennel	Cool	45 - 75	60 - 65		
Garlic	Cool	45 - 85	55 - 75		
Kale	Cool	40 - 75	60 - 65	65	55 - 65
Kohlrabi	Cool	40 - 75	60 - 65	60	55 - 75
Leek	Cool	45 - 85	55 - 75		
Lettuce	Cool	45 - 75	60 - 65	75	40 - 85
Melons	Warm	60 - 90	65 - 75	90	75 - 95
Mustard	Cool	45 - 75	60 - 65		
Okra	Hot	70 - 95	70 - 85	95	70 - 95
Onion	Cool	45 - 85	55 - 75	75	50 - 95
Parsnip	Cool	40 - 75	60 - 65	65	50 - 70
Peas	Cool	45 - 75	60 - 65	75	40 - 75
Peppers Hot	Hot	65 - 95	70 - 85	85	60 - 95
Peppers Sweet	Hot	65 - 85	70 - 75	85	60 - 95
Potato	Cool	45 - 75	60 - 65		
Potato Sweet	Hot	65 - 95	70 - 85		
Pumpkin	Warm	50 - 90	65 - 75	95	70 - 95
Radish	Cool	40 - 75	60 - 65	85	45 - 90
Rutabaga	Cool	40 - 75	60 - 65	85	60 - 105
Salsify	Cool	45 - 85	55 - 75		
Shallot	Cool	45 - 85	55 - 75	75	50 - 95
Spinach	Cool	40 - 75	60 - 65	70	45 - 75
Squash (Summer & Winter)	Warm	50 - 90	65 - 75	95	70 - 95
Tomato	Hot	65 - 85	70 - 75	85	60 - 85
Turnip	Cool	40 - 75	60 - 65	85	60 - 105

## Helpful Tips:

Most vegetable seeds prefer soil temps around 72-77° for germination. The most notable is mache (corn salad) that likes it closer to 55°. Most root crops: beets, carrots, parsnips, rutabagas and turnips aren't picky but prefer it warm, closer to 80-85° for seeds to germinate with cooling weather to mature.

Plants that like warm soil and warm air temps usually prefer to be planted in the spring.

Plants that like warm soil but cool air temps prefer to be planted in the late summer when the soil is still warm but when cooler fall weather is coming.