# Vegetable Production in the Pacific Northwest Coastal Region

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## VEGETABLES A TO Z.....

Vegetables are not difficult to grow, but they do need more attention than most ornamental plants. With some crops you will get just one chance a year so it is wise to give them the attention and conditions they need right from the start.

Start with good soil, high in organic matter and a pH between 6 and 7.

Be sure they have enough food and water to promote steady growth.

Protect plants from wind, rain and frost.

Prevent diseases and control, or exclude hungry pests.

## ARTICHOKES

These perennials get larger and more productive each year and they like our climate. They are tolerant of light frost, but not root hardy in very wet and cold clay soil. Seeds take 21 days to germinate after chilling. Aphids love them, keep a close eye out: If you see ants, look for aphids and wash them off with a hard spray of water or dust with your favorite insecticide. A good variety that will produce chokes the first year is "Imperial Star", others will take two years to produce.

## ASPARAGUS

Asparagus will grow anywhere in our region, these perennials need full sun. They will grow in mass and size of spears, spreading out so will need some space to grow into. All male hybrids have been bred to produce more and larger spears instead of seeds. Whether grown from crowns or seeds, you can harvest lightly the second year and for about 6 weeks each year thereafter. Then the ferns must be allowed to grow and store energy for the next years' crop. Slugs are especially fond of new spears. Put bait out early or you may find only a stump.

## BEANS

Bush beans take more space and can end up sprawling on the ground. They tend to set a crop and stop producing. Pole beans are more productive over a longer period. They require trellising, may grow 6' to 8' and will cast a shadow. They are easier to pick for old backs and knees. Beans come in green, yellow and purple, the latter turn green when cooked. Beans require warm soil to germinate; if the soil is cold the seeds are liable to rot. They are easy and more dependable to grow as transplants. Sow 3-4 seeds to 4" pot indoors, on heat if possible. Transplant at two true leaf stage; handle very carefully. Dry shelling beans require a long warm season to mature and dry; even

shallow or heavy soil. Nantes: medium length, the most common; and imperator, very long, commercial type carrots. The varieties meant to be grown as baby carrots will do well in shallow soil or containers. Wire worms and carrot rust fly maggots will burrow into the root effectively ruining it. Carrot Rust Flies can be excluded by the use of row covers, but wire worms are more difficult. The problems seem to be regional.

**CORN**

Corn will not grow close to the ocean because it needs heat. Several miles inland it is worth a try if you have full sun and a warm spot. Choose early to mid season varieties, Maximum of 80 days to maturity. Ultra early varieties will produce small ears but may not be as good as larger later varieties. It is important to understand the various types of corn and the needs of each. The super sweet types may need isolation from other corn types and some need very warm soil to germinate. "Lucious", a new type called tablesweet is my personal favorite. Corn is really big grass so it needs plenty of nitrogen. It does not transplant well so should be direct seeded when soil is warm. For good pollination plant in as close to a square plot as possible. Corn is pollinated by wind so if it is planted in long single rows you may not get good pollination. Cover seed bed with floating row cover to enhance heat and foil crows and jays. In our area there are few problems, an occasional corn ear-worm, earwigs and aphids.

**CUCUMBERS**

Cucumbers are an easy crop. They prefer to be warm and need some protection from the wind. Great in the greenhouse, trellis them up to keep fruit straight and clean. Seeds are best started inside on a heat mat, 75 to 80 degrees; they will not germinate in cold soil. Hybridizing has bred out the bitterness common with older varieties. Since they are pollinated by bees or insects the best and easiest cucumbers are seedless varieties with all female blossoms that need no pollination to set fruit. The catalog description should say clearly that they will set fruit without pollination. Some to look for include "Sweet Success", "Diva" and "Cool Breeze". English cucumbers are best in the GH, seed can be expensive, but they are well worth the money. Some to look for are hybrids "Pepinex" or "Socrates" and open pollinated "Tall Telegraph". Common problems include powdery mildew and 12 spot or striped cucumber beetles. Flea beetles like them as well.

Pickling cukes?

**GREENS**

Many greens will grow well in our cool climate. They are especially good for spring and fall crops in the cloche where they stay clean, and don't get battered by rain and hail. Most will transplant well. The thing to remember is that you are growing them for their leafy parts, so they need plenty of nitrogen and water to grow fast. If they grow too slowly they are liable to be tough, strong tasting or bolt. Most greens are fast maturing crops so many will bolt no matter what the weather conditions. They need to be succession planted, seeds sown every couple of weeks, to have a continuous supply. Most are attractive to slugs and flea beetles.

**LETTUCE**

Lettuce is an easy crop for anywhere in our area, in cloches or outside in the summer. Lettuce can be direct seeded, but is easy to start inside. It needs only bright light but no direct sun or heat to germinate. Seedlings transplant very easily and are actually

hard to kill. Like other tender greens you will get the best lettuce if you protect from heavy rain and hail. Lettuce also needs plenty of nitrogen and consistent moisture or it will bolt and get bitter. The variety to choose from is huge, from baby to huge heads with many color and texture variations. Some newer varieties have some bolt resistance and heat tolerance bred in. Lettuce doesn't cross-pollinate easily so you can save seeds of your favorites. Plant seeds about once a month for a steady supply, set half out and hold the other half to be planted a week or two later. The biggest problem is slugs; they crawl in and have no reason to come out. Food and shelter in one! Bait as soon as planted out and check often.

**GARLIC**

Garlic is one of my favorite crops and very easy to grow. Garlic is clone propagated; it rarely has flowers and bears no true seed. There are two different types of garlic, soft neck and hard neck. The soft necks have several layers of small cloves; it is what you find in the grocery store. The hard necks generally produce large bulbs with fewer and very large cloves. This type puts up a stiff stalk in the center. These stalks should be removed when they have made one curl to direct the energy to growing large bulbs. These tender stalks are delicious stir-fried. Garlic needs sun and prefers loose, well limed soil and moderate fertility. Plant on 5" centers in October to harvest the following summer. Mulch to discourage weeds and keep bed weed free. Don't water after first of June. Harvest when half the leaves show some yellowing; don't leave in the ground too long or they will split their wrappers. If in doubt, dig a bulb and check for clove development. Hang in a warm dry place with leaves intact to cure for about a month. Clip tops to 1" and trim roots. Store at around 60 degrees in a dark dry place. An out of the way closet in the house works well. Refrigeration will break dormancy and promote growth. Save the largest cloves for seed to be planted in October.

**ONIONS**

Onions need full sun and prefer light soil high in organic matter. Plant onions on 6" centers for the biggest bulbs. Onions grown from seeds are preferable to sets for a couple of reasons. Onion sets are more prone to disease and a larger percentage will produce flower stalks. Seed grown onions may get larger and there are many more varieties available. They are easy to start, plant in March in deep pots for long healthy roots. There are two different onion types; long day and short day. In our latitude we need long day types since day length governs bulbing. New day neutral varieties, crosses of the two types, are not subject to day length and have the potential to get very large. Onions have shallow roots; need an inch of water a week. Weeds will steal nutrients and water; keep beds weed free. Onions are relatively free of problems but onion maggots may attack. Check the roots if onions are not showing good growth and use insecticide if necessary. In late summer when half the onion tops have fallen over bend the rest over and leave for a few days. An enzyme in the neck tells the onion to go dormant. Pull onions carefully keeping tops intact. Hang in a warm dry place to cure. Cut tops to one inch and trim roots. Length of storage depends on the variety of onion. Store cool and dry.

**PEAS**

Peas will grow anywhere in our area but should be protected from the wind. Choices include shelling peas, sugar pod and snap peas. Several varieties have been developed at OSU by Dr. Baggett. When soil is wet and cold, pre sprout in the house in a tray between two layers of wet paper towels, this method is my preference anytime. Be sure

to maintain moisture but don't drown them. In 4 or 5 days when the root is visible, place on the top of a prepared bed and cover with compost or soil. When planting out at this stage, use a dusting of insecticide to protect the vulnerable seeds. Build supports out of anything the peas can cling to, string and stakes works very well. Unsupported they will sprawl on the ground and be targets for crawling insects, disease and dirt. Powdery mildew is a common problem but can be discouraged with good air circulation. Aphids like peas and pea enation mosaic virus is a disease spread by aphids. Newer varieties have resistance or tolerance to this disease bred in but you still need to watch for aphids. Plant peas every few weeks from late winter to mid summer for a continuous supply.

**PEPPERS, SWEET OR HOT**

Peppers definitely need a warm atmosphere to grow and produce; full sun is best. Even with a good cover close proximity to the ocean may not work, they really need the heat. Hot peppers are easier to grow than sweet, but may not reach their full heat potential without being grown in a warm location. They are heavy feeders that need good nutrition and irrigation. When looking at sweet varieties choose ones that state they are good in cool climates. Plants require support, a small tomato cage is just right. Green peppers are not ripe and not sweet but any red variety can be grown for green peppers. The sweetest peppers are those that are allowed to get ripe and fully colored. Slugs love the peppers and aphids like the leaves. They are subject to the same diseases as tomatoes.

**EGGPLANT**

This crop needs a lot of HEAT, more than peppers and tomatoes, and few local gardeners have been successful. If you do want to try them follow the directions for peppers. Choose small Asian varieties for the best possibility of success.

**POTATOES**

Potatoes grow very well in the coastal climate and anywhere in our region. They are easy and will do especially well in light sandy soil, needing only moderate fertilizer and water. There are many combinations of colors of skin and flesh; yellow kinds look like they've been buttered. There are many types from fingerlings to huge lunkers, with many different textures. Some bake or mash better and some are waxy and firm textured. Do not lime soil where you plan to plant potatoes; keeping the soil on the acid side will help discourage scab disease. Scabby potatoes, although unsightly, are edible. Potatoes can be planted fairly early, though they are not frost tolerant they will grow again if frosted. Too much water and fertilizer will cause the potatoes to grow too fast and get a disorder called hollow heart. Basically an empty spot in the middle, you'll know it if you see it. Pests that like potatoes are flea beetles and wire worms. Flea beetles eat pin holes in the leaves and lay eggs that when hatched will burrow into the potato, dusting the leaves with insecticide will control them. Wire worms, the larvae of click beetles, will also burrow into the flesh ruining it. These are hard to control, learn what they look like and kill them as they appear.

**PUMPKINS AND WINTER SQUASH**

Pumpkins will grow close to the ocean with some wind protection; small early ones will work best. Winter squash must be grown inland; they need heat and a long season to produce a sweet flesh. Good fertility and plenty of water will produce big fruits. Some of the newer hybrids are very sweet. There are many beautiful heirlooms available from

around the world. Pumpkins and squash can be direct seeded but starting them inside will give you a head start on the long growing season. They transplant easily if handled carefully. Powdery mildew is a problem in our climate; it blocks the plants ability to convert sun energy to sugar. It needs to be prevented so that the squash or pumpkin will attain large size and maximum sweetness. All squash types need to be pollinated, this is a question you are likely to get and goes something like this; the client complains they have lots of blooms but no squash. It is likely that the blooms are not getting pollinated. This happens if there are no bees, or if there is only one plant. More plants will increase the probability that you will have a male and a female blossom open on the same day. They can be hand pollinated by using a brush to transfer ripe pollen in the middle of the day from the male blossom to the female blossom. It's very easy! The female blossom has a miniature fruit; the male blossom has only a stem. Harvest before frost, store cool and dry, not cold. Squash may not develop full sweet flavor for a month or so.

**SUMMER SQUASH**

Zucchini is sometimes a joke, but most summer squash are very easy and will grow close to the ocean with wind protection. Most summer squash varieties will cross-pollinate but not with winter squash. If you only grow one plant, pollination is the single biggest problem you will have. It is a good idea to grow at least 2 or 3 to ensure that you get male and female blossoms open at the same time. If you don't want all zucchinis plant a couple of other kinds, there are many colors and types to choose from. Saved seeds will produce interesting crosses. Squash need good food and water to keep producing; just 6 plants, total of 2 varieties, "Gadzooks" and "Italiano Largo", produced around 120 fruits with continued additions of fertilizer and water through the summer. Squash will grow rapidly, keep picked to promote continued production. When small they need protection from slugs and beetles. Once plants get some size there are few insects that can harm them. Powdery mildew is the biggest problem for squash in our climate; it must be controlled to get continued production. Some varieties have silvery markings on the leaves that resemble mildew but are not.

**TOMATOES**

Depending on where you live it is very possible to grow your own tomatoes. You will need at least 8 hours of sun. If you live close to the ocean a southwest exposure is best, a wall to radiate heat helps. Sun and heat are what makes tomatoes sweet! You will need some kind of cover. It can be a very simple cloche or a greenhouse. The cloche can be a large cage wrapped in clear plastic. Without cover you will not get ripe tomatoes. Though tomatoes are self-pollinating, those grown under cover need help with pollination.

Choose early maturing varieties, 80 days or less. If you are close to the ocean fewer days is better. For our climate, you should add about 2 weeks to the stated days to maturity. Cherry or small-fruited tomatoes may have a better chance of ripening. A couple of short compact cherry tomatoes are "Honey Bunch Grape" and "Sweet Baby Girl".

Start your own seeds if possible, that way you can choose varieties that are best suited to your conditions. Look for disease resistant varieties. Tomatoes like good fertility but not too much nitrogen. You want steady growth and good green leaves. Keep moisture consistent especially when plants are fruiting. You can grow tomatoes in pots but you will need to keep them well watered.

The single most important detail in choosing a tomato variety is the growth type. Learn these two terms describing the two types, it should appear on every tomato plant or seed packet. If it doesn't you may assume that they are indeterminate.

- Determinate varieties are shorter, and more compact, some are dwarf and may not need much support. This type will set a crop of fruit; stop producing flowers and direct energy to growing and ripening the fruit. These are good if you live close to the ocean or are growing in a cloche.

- Indeterminate varieties continue to grow taller and keep producing more blossoms and setting more fruit, until killed by frost. They also require more pruning to keep them under control. They can easily take over a cloche or grow out of the space allotted to them. Be aware that most (not all) "heirloom" tomatoes are indeterminate, will grow large plants and may be slow to ripen fruit.

The main issues are, do you have space for a six or seven foot plant and will all the fruits ripen? If you are close to the ocean and considering our short season climate it may make more sense to grow a determinate type that will get a good fruit set and then ripen it. You don't need a huge plant with a lot of green fruit on it in November.

All tomatoes should have support to keep them off the ground. If you are going to grow an indeterminate variety, be prepared to support it. If they are planted outside with a large cage, you will need to secure the cage to a sturdy stake, or two, to prevent it falling over.

Tomatoes are subject to a number of diseases. Most are hard to identify and not common in our area. Late Blight is a devastating fast moving fungus that shows up when the weather conditions are just right, usually late in the season. It starts with a small gray patch on one leaf, soon there are more. It leaves foliage looking burnt and soon it affects the fruits and quickly kills the plant. There is NO CURE! There are preventative treatments and prevention is key! Organic and conventional sprays started early and used weekly should keep plants healthy. Some varieties have resistance to some diseases bred in, but not to this particular disease. Do not smoke around the plants or handle them if you have been smoking. Tobacco mosaic virus affects tomatoes and can be carried in cigarettes. Do not irrigate overhead and avoid splashing water on the leaves.

Destroy any diseased plant parts by burning or putting in trash. Do not put grocery store tomato or potato trimmings in the compost. Since they are subject to the same diseases you should not compost any tomato or potato parts. As much as possible, rotate your crops.

Blossom end rot is a condition; it is not a disease. It is a calcium deficiency caused by irregular or insufficient water. It shows up as a dry leathery brown patch on the blossom end. It is unsightly but does not affect the tomato.