

Roots, Tubers and Bulbs Presentation – Quick Summary Sheet

Sweet Potato

Start with slips (vine) from a mature root - sprout slips from a sweet potato placed lengthwise in a container of soil and keep warm and moist in a sunny window. ***Note* if you are buying a sweet potato at the grocery store to grow your slips, be sure to choose an organically grown sweet potato to avoid the use of sprouting inhibitors typically applied to non-organically grown produce to improve shelf life.** Remove the sprouts when they are 6-8" long and immerse them in a container of water until roots form - this will take about 2 weeks. Plant these roots slips.

Sweet potatoes prefer fluffy, deeply amended soil offering less tension on swelling roots.

Plant after nighttime temperatures are above 55 F

Plant rooted slips 12" apart allowing 3' for vines – you can trellis them with tomato cages.

Fertilize with higher phosphorous fertilizers after established

Fertilize with 16-18-8 when planting

Fertilize with 5-10-10 during the growing season

Water regularly and deep water on hot/dry days

Time to maturity – expect at least 100 days

Harvest before first fall frost

Curing - brush off after harvest and place on racks in a warm space with good air flow for a few weeks.

Potato

Choose the best type and variety for your needs and growing conditions

Early, Mid or Late Season Types/Varieties - there are seven different types (Russet, Red, White, Yellow, Blue/Purple, Fingerling and Petite). Within these seven types there are early season, mid season and late season varieties – overall there are more than 200 known varieties!

Cool Days = number of days from last frost in your area to soil temperatures over 70 degrees F. Potatoes stop growing when soil temperatures reach 80 degrees F.

Potatoes (cont'd)

Early Season - Best choice for warm southern climates (60-100 cool days)

Mid-Season - Can grow in most climates (101-135 cool days)

Late Season - Best choice for northern climates

Determinate or Indeterminate - Hill up the indeterminate variety to increase yields

Start with chits from seed potatoes - chits are sprouted seed potatoes.

Cut your chitted seed potatoes into chunks and let them heal over for a few days
2-3 eyes or buds per chunk - if the seed potato is the size of a golf ball or smaller, don't cut it - plant the whole potato.

Chitted seed potatoes give your plants a head start - you'll need this to beat the heat!

Prefers deep, fluffy and deeply amended soil

Plant after soil temperatures are above 50 F

Plant chits 4" deep, 12" apart and hill 6" to high as they grow

Plant chits 7-8" deep and 12" apart – no hilling

Fertilize with higher phosphorous fertilizers during tuber formation

When planting - 10-10-10

One week after leaf emergence 10-10-10

Four to six weeks after leaf emergence 5-10-10 bi-weekly until harvest

Time to maturity – generally 90-135 days

Potato flowers signal tuber growth has begun and small new potatoes can be harvested a few weeks after the plant flowers. Harvest time for mature/larger potatoes is best after the plant goes brown and dies back.

Curing – in ground or root cellar

In-ground curing - cut the water off to the potato plants a week before removing the top of the plant at the soil line. Cover the area with 4" blanket of straw and allow the soil to dry out for a week to ten days then gently harvest the potatoes.

Immediate harvest and root cellar curing - remove the tops of the plants and gently dig up the potatoes. Place them on a drying rack in a root cellar at 40-50 degrees F with a humidity level of 90% for a few weeks.

Jerusalem Artichoke – sunchoke, perennial sunflower

Choosing your variety – 25 varieties with colorful tubers (red, white, gold and purple)

Very hardy perennial sunflower stalks grow up to 10'

VERY high in the pre-biotic fiber inulin. Your gut flora loves inulin, but this tuber will promote intestinal gas.

Invasive - will take over a garden space - so be careful to harvest all tubers and pieces of tubers

Start with tubers, cut into sections as you would a seed potato - except plant the sections right away don't let them heal over.

Grows best in well-draining, slightly alkaline soil

Fertilize with 6-12-6 when planting

The plants/stalks have 28% protein - excellent feed for goats, sheep, pigs, cows

Use the sturdy stalks to grow pole beans or use as a natural windbreak.

People enjoy the tubers either raw or cooked (recommended)

Time to maturity – generally 130 days

Harvest when the stalks and flowers are brown and dry. Tubers are sweeter if left in the ground until after the first frost.

Curing – in ground or root cellar ~ 32 degrees F - does not store well in warm temperatures. Alternately, you can leave/store the tubers in the ground until you are ready to use them.

Garlic

Choosing the horticultural group and cultivar:

Hardneck or Softneck?

Garlic Vernalization: Over the winter, the garlic goes through a process called vernalization, whereby the cold temperatures stress the seed and divide it into separate cloves. The more time the garlic has to grow before forming bulbs, the larger the heads will be.

Hardneck – Requires longer/colder vernalization period. Has more symmetrical cloves and they grow scapes (flower shoots). Requires greater cold exposure to make bulbs. Usually best suited to northern climates.

Garlic (cont'd)

Hardneck types need longer/colder vernalization periods, when grown in warmer temperatures they may begin bulbing too early when the daylight hours are >13 and air temperatures are > 68-70 degrees F and soil temperatures are over 60 degrees F. If it gets too hot too soon the hardneck garlic bulbs will be small.

Horticultural Groups (8): Porcelain, Rocamboles, Purple Stripe, Glazed Purple Strip, Asiatic, Turban and Creole.

Softneck – Not as affected by vernalization as the hardneck types. Less symmetrical (cloves in assorted sizes) but more tolerant of warmer temperatures and better suited to southern climates.

Horticultural Groups (3): Silverskin, Artichoke, and Middle Eastern

Cultivar (hundreds to choose from!)

Start with cloves - break apart the bulb and plant the cloves right away. Try not to damage the thin, paper-like outer skin of the clove. Plant 2-3" deep and 6" apart, pointy end up. Rows should be 12-18" apart.

Prefers sandy loam or clay loam soil pH 6.0-8.0

Plant in fall when soil temperatures are about 50 F - mulch with 4-6" of straw

Fertilize when planting with 10-10-10 and compost

Banding with high phosphate fertilizer in the spring

Time to maturity – generally 250-270 days

Harvest in late June or July when the lower leaves are brown and dry but there are still 5-6 healthy green leaves. Stop watering for a week or before harvesting. Allowing the soil to dry will make harvesting easier. Do not pull the garlic up from the top before loosening the base/roots gently with a garden fork – the stalks may be broken off from the bulb which will affect curing and storage life. However, garlic may be used right away – curing is not necessary but will extend the life of the bulb for use throughout the following months.

Curing – hang for 2-3 weeks in a dry, airy space out of direct sunlight. Bundle the entire stalk and bulb into a bundle of 6-8 plants and hang to dry. You can also lay the garlic on a drying rack taking care not to overlap the plants allowing for better air circulation.

After 3-4 weeks of drying in a warm, well-ventilated space out of the direct sun, the garlic is ready to trim or braid for long term storage.