Gardening Basics

Growing Potatoes

If you have never had a "new" potato, you are missing one of the supreme joys of home vegetable gardening as they are guaranteed to taste unlike anything store bought. Potatoes are rich in vitamins, minerals, and antioxidants and can be grown in containers, rows or raised beds, anywhere you have enough direct sunshine. See the end of this article for links to additional information.

Timeline

In order to allow for prep and chitting (a.k.a. sprouting) you need to buy seed potatoes 2-3 weeks before North Texas' potato planting date which is traditionally Valentine's Day (Feb. 14) through early March. Spuds are a 90-100 day crop and grow best in cooler weather so, by counting backwards, our inevitable May heat dictates an early start.

The Seed

Potatoes (Solanum tuberosum) are not grown from seeds like most other plants but from actual potatoes you buy from nurseries or feed/farm stores that sell "certified seed potatoes", meaning they are disease and fungus free. Select firm, unwrinkled specimens without sprouts. Potatoes from the grocery store are treated with chemicals so they don't sprout and grow while stored and, of course, that's exactly the opposite of what you want in a seed potato.

For Denton County, the Texas A&M AgriLife Vegetable Variety Selector website: https://aggie-horticulture.tamu.edu/publications/veg_variety/ recommends these with (days to harvest):

All Blue (90 days): Heirloom, deep blue skin, blue flesh
Caribou (95 days): Russet, heat, and drought-tolerant, high yields
Désirée (95 days): Red skin, yellow flesh, drought-tolerant, disease-resistant
Kennebec (80 days): Buff skin, white flesh, medium-to-late maturing
Norland (80 days): Red skin, white flesh, early maturing
Red La Soda (100 days): Deep red skin, white flesh
Russian Banana (90 days): Heirloom, fingerling, yellow skin, golden flesh
White Cobbler (80 days): Buff skin, white flesh, early season
Yukon Gold (90 days): Light yellow skin, light-yellow flesh

Please note that ordering online may be problematic since producers' first shipping dates may be too late for Texas' planting calendar. You can select smaller seed potatoes (large chicken egg size) or fingerlings and plant them whole, but if you buy larger ones, cut them in 2" cubes so that each piece has at least two 'eyes' (dimples in the skin where the sprout will emerge).

The amount of seed potatoes to buy depends on your growing method. **For raised beds**, space your seed potatoes about 12"-18" apart. Mature plants are 18"-36" wide and tall. **For containers,** you can use half whiskey barrels, 5-gallon buckets, 3-gallon flowerpots, black felt grow bags, or other re-purposed containers like heavy cardboard boxes, but just make sure the sides do not admit any light. (Potatoes exposed to light develop a chemical, solanine, and turn green which then all traces must be trimmed away before eating as it is toxic.) All containers must have several drainage holes. Plant 1-5 seed potatoes in each (see below). Containers have the "no dig" advantage of your being able to turn them over on a tarp at harvest time and never miss any, but container growing means, as always, you will need to water more than in-ground gardening. Potatoes need approximately 6 hours of direct sunshine each day so choose your location accordingly, with awareness that your now leafless trees will be casting shade come March.

Lay your pieces out, cut side up, in a warm place for at least 2-3 days so that the cut surface dries thoroughly to help create a barrier against soil bacteria/fungal spores. Now onto chitting which may be termed "an old English technique" to give them a head start by allowing them to sprout before planting. Turn the cut pieces eyes up, not touching, in a warm place with indirect light and leave them. Placing them or the whole small potatoes in empty egg cartons, eyes upward, on a windowsill in indirect light is efficient and easy. In approximately 10-14 days when the tender sprouts are ¼-½", it's time to plant. A north facing window may take longer.

Soil Prep

For raised beds/rows:

The ideal growing medium has good aeration (e.g. not heavy clay) so prepare the soil by digging over to loosen it to a depth of 6-8" and incorporate plenty of organic matter such as compost and leaves so as to provide nutrients and increase drainage. Do not add manure as it can increase the risk of potato scab disease. Ideally, it should resemble the texture of potting soil – loose and free draining. Avoid planting where you have grown members of the Solanaceae family (potatoes, tomatoes, peppers, eggplant) in the past 2 years. Heap the soil up in rows then flatten the top, then make a trench in the middle of that 'berm' about 6" deep, sprinkle the bottom of the trench with any granular complete fertilizer (e.g. 10-20-10) – about 1/3 cup per 10' row - then cover over the fertilizer with about 2" of soil. Do not use high nitrogen fertilizer (first number is high, like 20-5-5) as high nitrogen will result in more leaves and less potatoes.

For containers:

Fill the container approximately 4-5" deep with good soil mixed with compost, so as to resemble loose potting mix. Sprinkle the soil with any granular complete fertilizer (e.g. 10-20-10) and cover with 2-3" of soil. Water well.

Planting

If you have chitted your potatoes, be careful with the sprouts as they are fragile. Place the seed potato with eyes or sprout up, 12-18" apart in raised beds/row planting. With containers, place 1 seed potato/piece in a 3-gallon pot, 2 in a 5-gallon pot, and 5 in a half whiskey barrel or approximately 12" apart in a large container. For row planting, gently pull the soil over from the berm to a depth of 4-5" and add about 2-3" of soil to container planting to cover potatoes. Water well. Shoots will appear in 2-3 weeks.

Growing procedure in a nutshell

With either container or raised bed/row gardening, potatoes are initially planted deeply so that their roots go down to fertilized soil below the seed, shoots grow up and emerge. When the plant is 8" tall, pull additional soil or compost snugly up (called hilling up, earthing up, or laying by) around the growing shoot only leaving 2-4" inches of visible plant above the soil. The plant continues to grow, and in about 2-3 weeks, repeat the hilling up when the plant has grown again to 8". The stem and leaves will not be harmed by covering with light soil or compost. The young potatoes form

below ground but above the seed potato, attached to the main stem by their own thin stems called stolons so burying the main stem with the growing medium stimulates the production of stolons and excludes light.

After the first hilling up, apply a second application of fertilizer in the row between the plants or on top of the soil in a container and scratch it in, then water. In a container, continue the hilling up procedure until soil is 2" below the rim.

Frost protection

Because Texas' climate mandates planting before the last average frost, be aware that potato plants are tender and can be nipped back or possibly killed by frost. Cover to protect them with frost cloths, towels, blankets, etc. and/or you can completely cover the young plants with soil and yes, they will re-emerge from that soil blanket on their own! Always remember that plants in containers are more vulnerable to freezing temps.

Watering

Potatoes need approximately 1-2" of water a week, more in sandy soil and more as temps rise. As we know, potatoes have a high water content so are heavy drinkers but don't like to be flooded or they can rot. In other words, a steady level of moisture is vital to having a good crop. Keep an eye on containers as they will need more watering than in-ground crops.

Harvesting

When you see your plants have flowered, you can harvest "new" potatoes by feeling around in the soil with your hand and gently separating a few from their stolon. Be sure to replace the soil so as not to expose any growing potatoes to light. When the plants turn yellow and die down, the rest of the harvest begins. **Warning**, should you spot any "fruit" on the plants' branches resulting from the flowers, **these are not potatoes and are poisonous**, so do not eat! To harvest from a container, turn it over and sift through the soil with your hands or if in a raised bed/rows, use a garden fork or spade to gently turn over the soil, starting some distance from the plant so as not to spear your precious crop. You can also just pull up the plant but will still need to explore the soil for any that may have become detached.

Potatoes are quite a forgiving crop as long as they are grown in loose, free draining soil, get direct sunshine for at least 6 hours, are fertilized (with chemical or organic fertilizer), and are watered regularly. All gardeners – young and old - enjoy this fast, fun gardening experience that results in delectable treats.

Resources:

Texas A&M AgriLife Extension
"Easy Gardening Potatoes, E-511"
https://aggie-horticulture.tamu.edu/organic/files/2011/03/E-511_irish_potato.pdf

University of New Hampshire Extension "What is the best way to grow potatoes in containers?"
https://extension.unh.edu/blog/2020/03/what-best-way-grow-potatoes-containers

Vegetable Variety Selector - https://aggie-horticulture.tamu.edu/publications/veg_variety/