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Peas in the Garden

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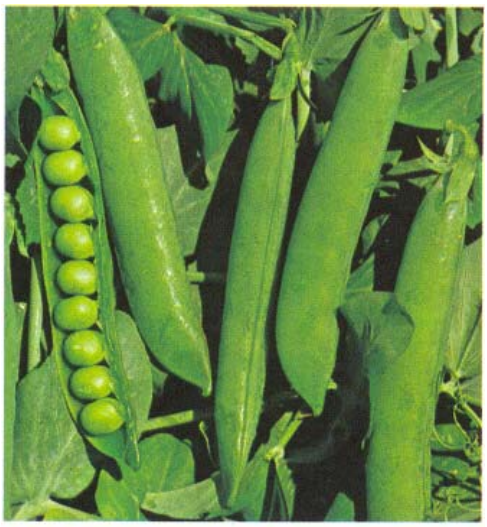
Summary

Peas require full sun and fertile, well drained soil for maximum yield. Incorporate plenty of organic matter and a complete fertilizer into the area before planting. When soils are above 40ºF, space rows 12-24 inches apart and plant seeds 1 inch deep and 1-2 inches apart in the row. Plant peas until April 1 in warm areas and until May 1 in the cooler areas of Utah. Peas require regular watering particularly at flowering, so maintain soils near field capacity during this time period. Hot temperatures and water stress will reduce yields and pod quality. Organic mulches help conserve water, supply extra nutrients, and reduce weeding. Control insects and diseases if they occur. Harvest snap peas when pods are plump and garden peas when the pods are full but before seeds mature. For dry peas wait until pods are yellow and the seeds are dry. Use fresh peas immediately for best quality.



Recommended Varieties

There are many good pea varieties for sale in local gardening outlets and through seed catalogs. Most grow well in Utah. Pod shape and size vary among varieties. Here is a list of some potential varieties and plant types that have performed well in Utah.

Pea Types	Selected Varieties
Garden Pea	Dual, Early Frosty, Green Arrow, Lincoln, Little Marvel, Perfection Dark Seeded, Sparkle, Waldo
Snap/Snow Pea	Dwarf Grey Sugar, Oregon Sugar Pod, Snowflake, Sugar Daddy, Sugar Sprint, Super Sugar Snap
Dry Pea	Most garden pea varieties can be grown for dry seed production.

How to Grow

Soil: Peas will grow in all soil types that are rich in organic matter, well drained, and fertile.

Soil Preparation: Before planting, incorporate 2-3 inches of well composted organic matter and 1 lb of all-purpose fertilizer (16-16-8) per 100 square feet of garden area. Work compost and fertilizer into the soil to a depth of 6 inches.

Plants: Peas are cool weather, frost tolerant vegetables that require soil and air temperatures to remain below 80ºF for best germination and plant growth. Start planting peas as soon as you can till the soil

in the spring. Seedling will emerge in 7-10 days when planted in soil of 55-65ºF. Peas do poorly when temperatures exceed 80ºF.

Planting and Spacing To plant 100 feet of row, you will need about 2-3 ounces of seed. Extra seed can be stored and used the next year. Plant seeds 1 inch deep, spaced 1-2 inches apart, in rows 12-24 inches apart. No thinning is necessary if plant stands are too thick. Plant garden and dry peas every 14-21 days until April 1 in warm regions and May 1 in cooler regions. Peas require 60-70 days to mature depending on variety. Snap peas generally produce pods over a longer time period so only one planting is necessary. Garden peas can be planted again around mid-August in Northern Utah and mid-September in warm areas of Southern Utah for fall production. Mulching the crop during the summer will improve soil water loss and increase nutrient availability. Yields of fall grown peas are not as good as the spring sown plantings.

Support: Most pea varieties are self-supporting during growth. Taller pea varieties are more productive and easier to harvest if caged, trellised, or fenced. Wooden poles, wire cages, or other fencing materials make ideal supports for peas. Snap and snow peas climb naturally so little additional work is required other than constructing the supports.

Water: Peas require regular watering throughout growth for best production. Soils should be allowed to dry until half of the available water is used before returning the soil to field capacity. Do not overwater as wet soil promotes root rot diseases and slows plant growth. Water needs are most critical after flowering. Drought stress will decrease yield due to pod abortion and reduce seed size, increase pod stringiness, and alter seed quality. Watering amounts depend on soil type and organic matter content.

Fertilization: Peas do not require additional fertilizer if an all-purpose fertilizer and compost was applied at planting. Additional applications of nitrogen will over-stimulate leaf growth, and will delay flowering, and reduce pod set. Most peas fix some nitrogen from the air via soil bacteria attached to the plants roots.

Mulches and Row Covers: Fabric row covers help protect very early plantings from frosts. Apply organic mulches such as grass clippings, straw, and shredded newspaper in the heat of summer to help control weeds, improve soil water holding capacity, and reduce soil temperatures in autumn pea plantings.

Pest Control

Weeds: Control weeds with regular cultivation especially when plants are small. Cultivate shallowly around plants to avoid root damage that slows plant growth. Weed control is most essential during the first 6 weeks of growth.

Insects and Diseases:

Insect	Identification	Control
Pea Aphid	The pea aphid is a large green to pinkish species. It forms large colonies on the undersides of leaves near the tips of new growth. This insect transmits the Pea Enation Virus, which causes curling, mottling, and deformation of the leaves.	Plant virus resistant peas. Wash aphids from plants with a strong stream of water. Destroy infested plants after harvest. Liberal nitrogen applications increase aphid populations. Treat plants with appropriate insecticides.
Army Worms and Cutworms	These are green, reddish, or black caterpillars up to 2 inches long. Army worms will climb the plants and feed on leaves and stems. Cutworms do most of their feeding near the soil surface.	Control weeds and debris in the garden that provide cover for worms. Use appropriate insecticides if populations are high.
Pea Weevil	The pea weevil is a brown flecked beetle with a short, broad snout. Adult females lay eggs on young pea pods and the larvae burrow into the pod and feed on the seed.	Early planting and harvest minimizes exposure. Pick off adults when found and apply appropriate chemicals if populations are high.

Disease	Symptom	Control
Fusarium Wilt	Fusarium wilt causes a downward curling of leaves and stems become brittle. Cut stems and roots show yellow-orange discoloration within the vascular tissue. The disease becomes a problem when soil temperatures exceed 70ºF.	Plant resistant varieties. Plant early, so the crop develops before the soil reaches the optimum temperature for wilt development.
Pea Enation Mosaic	Aphid transmitted virus disease. Leaves are mottled, crinkled, and stunted and show white flecking on leaves and pods. Pods may be badly distorted.	Plant resistant varieties. If using susceptible varieties, plant early to avoid aphid infestation. Control aphids with appropriate insecticides.
Powdery Mildew	A powdery white fungus grows on the leaf and stem. Plants are dwarfed if infested early. Affected pods may develop small brown to black necrotic spots.	Plant early-maturing or resistant varieties. Spring seedings have less mildew problems than autumn plantings.
Root Rot and Damping Off	Infected plants are stunted, and lower leaves are yellow. Gray, red, or black lesions form on lower stem and roots.	Avoid compacted and/or wet soils. Seed in spring when soil is below 65ºF. Avoid using too much nitrogen.

Harvesting

Snap peas are harvested before the pods are fully mature. Pods should be full size, with small seeds, and have firm, crisp flesh when picked. Snap peas are ready for harvest about 5-8 days after flowering. Pick regularly as the plant will flower and mature the pods for 3-4 weeks. Garden peas are ready for harvest about 18-21 days after flowering. Pick the pods when the seeds are plump and shell before use. Use snap or garden peas immediately for best quality and flavor. Refrigerate if not used immediately. Dry peas are harvested when the pods are fully mature and they are beginning to dry. Pull up the plants and lay in a row in the garden for 5-7 days. Once plants are dry, remove the pods, shell out the seeds, and allow additional time for the seeds to dry further. For long term storage, keep in sealed containers in a cool dry place.

Productivity

Expect 20 lb of shelled peas per 100 feet of row from garden types and 30 lb of pods from snap or snow pea types. Plant 15-20 feet of row per person for fresh use and an additional 40-60 feet of row per person for canning or freezing. With dry peas expect about 15-20 lb of seed per 100 feet of row.

Nutrition

Green garden peas are a valuable source of protein, iron, and fiber. Sugar snap peas contain less protein, but are an excellent source of iron and vitamin C. Dry peas are high in lysine and tryptophan, an excellent source of protein and carbohydrates, but are low in fat and fiber.

Frequently Asked Questions

I have problems getting my peas to emerge early in the year. Peas generally germinate and emerge better when soil temperatures are above 40ºF. For very early plantings seeds can be germinated prior to planting. These establish more rapidly. As soils warm, you can plant directly to the garden. Finally, older seed or poorly stored seed may not germinate and emerge.

Why are the flowers falling off my plants? Plants may have been water or heat stressed just prior to or after the flowers open. Pea flowers are very sensitive to temperatures above 80ºF and if dry conditions occur, the plants will shed their flowers. Keep the soil moist and mulch later plantings to minimize these stresses.

Why do pea pods get stringy? Stringy peas are further evidence of heat or water stress. Fibers in the pods get tougher making the pods less palatable

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