

## Peas

The garden pea (*Pisum sativum*) is very sensitive to heat and thrives only in cool weather. In our area, peas are grown primarily in early spring, or planted late in the growing season for a fall harvest. In hot weather, peas grow slowly; insects and diseases are a problem; and pollination is poor resulting in pods with few if any peas.

### Soil Preparation

Peas need full sun. They can be grown on a wide range of soil types. Sandy, quick-warming soils favor early planting and harvest, but moisture may be a problem in a dry season. Soils must have ample moisture in order for seeds to germinate. For late planting, a well drained clay loam is ideal because of its cooler temperatures. Well rotted manure, compost, green manure crops or similar organic materials will improve the water holding capacity of the soil and is best for crop production. Three to four bushels of well rotted manure or similar material per 100 feet of row would be adequate when worked into the soil prior to planting.

Fall rototilling or plowing is recommended for the early pea crop. This way, the soil is ready for seedbed preparation a few days earlier in the spring.

### Liming and Fertilizing

A soil pH range of 6.0 to 6.8 is recommended for good pea growth. Lime should be applied if the pH falls below 6.0. Have your soil tested by the UMass Soil and Tissue Testing Lab ([www.umass.edu/soiltest](http://www.umass.edu/soiltest)) and follow the recommendations given. Lime, (if needed) is most effective when worked into the soil in the fall.

In addition to the lime and organic matter, apply 1 ½ to 2 pounds of 10-10-10 fertilizer per 100 square feet. Fertilizer should be broadcast evenly and worked into the top two to three inches of soil prior to seeding. Do not place fertilizer in contact with the pea seed.

At time of pod set it may be a good idea to apply a sidedressing of fertilizer. This is especially important on light sandy soils. To sidedress apply eight ounces of 10-10-10 fertilizer for every 10 linear feet of row. For best results, work fertilizer into row with a light cultivation. Watering at this time would also be beneficial. To avoid burning roots, bands of fertilizer should be placed three to four inches away from the plant on each side.

### Natural Fertilizers

Natural fertilizers can be very effective when the right choice is made from the many types available.

### Inoculation

Peas are legumes which means they fix nitrogen from the air. This is of relatively little importance with quick-maturing dwarf pea varieties. But for longer growing varieties, pea seeds should be inoculated with a bacteria for best nitrogen fixation unless experience indicates otherwise. This practice is cheap and usually produces good results, particularly on land where legumes have not been grown before. To inoculate, dampen the pea seeds (so inoculums will

stick) shake the moistened peas in a bag containing the appropriate inoculums ( in the form of black powder). Cover the seeds thoroughly.

## **Planting**

Peas should be planted as early as the soil can be properly prepared. They are usually one of the first crops planted in the spring. Peas can be planted either in single rows or wide rows.

*Single rows:* Tall varieties are best grown in two single rows spaced six inches apart with double rows spaced 20 to 30 inches apart. Plant seeds 1 ¼ inches deep with a one to three inch spacing between seeds. Soil temperature should be 40°F or above at planting time. The object of a double row is to provide space between the rows for a trellis to support tall varieties. It also makes more efficient use of space.

Supports should be placed at planting time and may consist of brush four to five feet high after the stems have been pushed into the soil 12 to 18 inches. The brush should be well branched and close enough together to provide a ready hold for the pea vine tendrils. Chicken wire can be used. It should be four to five feet high, stretched as tight as possible between posts placed at eight to ten foot intervals. Chicken wire can be rolled up and stored at the end of the season. Brush is not as easy to obtain or dispose of.

*Wide rows:* Dwarf varieties can be grown using the wide row method. Make a trench six inches to one foot wide and approximately two inches deep spacing the trenches two to three feet apart. Scatter seeds (spacing them one to two inches apart) in the trench. Cover lightly with soil. Supports are not necessary although supports 15 to 18 inches high have proven successful.

Peas can be planted by the following three steps:

- Apply organic matter and recommended amounts of lime (if lime was not applied during fall).
- Rototill into soil.
- Broadcast recommended amounts of fertilizer prior to planting and work into soil.
- Plant.

## **Weed Control**

Peas require sufficient shallow cultivation to control weeds. Where brush or wire trellis is used, hand weeding is necessary. Cultivation should be shallow when the weeds are small to avoid damaging plant root system.

## **Watering**

Since peas are grown during cool weather irrigation is not usually necessary. However, if dry periods do occur, irrigate thoroughly early in the morning until the soil is moistened 8 to 12 inches deep. This will require at least one inch of water, (one inch of water per thousand square feet is 620 gallons).

## **Pests**

The principal insect pests are seed corn maggots, pea aphids, and pea weevils. Common diseases include powdery mildew and root rots. The basic control for root rots lies in crop rotation, planting in well drained soil and seed treatment with fungicides.

## **Other Problems**

**Problem:** Pea vines shrivel and die?

**Cause:** Hot Weather

**Problem:** Pods irregularly filled or not filled at all?

**Cause:** Poor pollination due to warm weather

### **Harvesting**

Pick when pods are filled with young tender peas. This means you may have to pick peas several different times during the harvest season, because they do not all mature at once. During maturity the sugar content of the pea seed decreases rapidly with an increase in starch. Fully matured pods contain peas which are tough and flat in flavor. Handle peas quickly after harvest and keep them cool, preferable below 40F until eaten or marketed.

Edible podded peas are best when pods are two and half to three inches long. Peas should be picked before the pods become netted. Edible podded peas have strings that should be removed before eating. To remove the string, pinch the tip of the pea getting hold of the string. Pull the string up the straightest side toward the stem; continue pulling string and pinch off the stem end.

**Note:** Peas, like sweet corn, are highly perishable and in demand by local consumers. Peas are difficult to grow when temperatures are high and the days are longer. Try later varieties for this purpose.

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