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GROWING GARDEN PEAS

- FOR THE TABLE
- FOR FREEZING
- FOR CANNING

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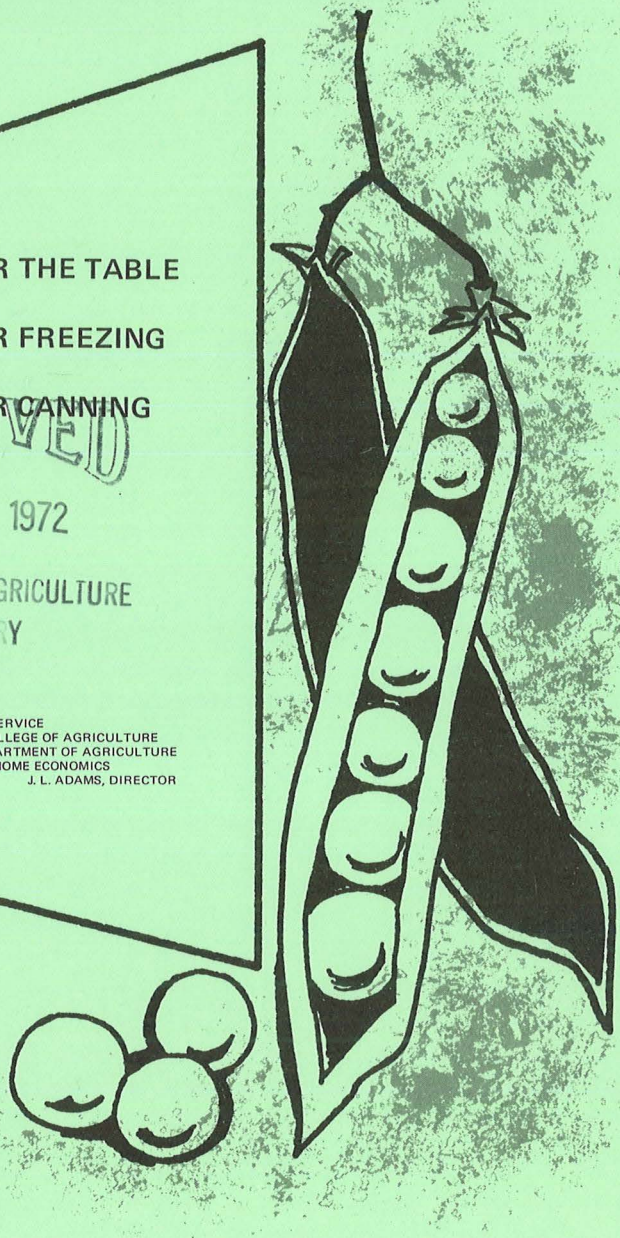

EC 71-1220

GROWING GARDEN PEAS
•*For the Table* •*For Freezing* •*For Canning*

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Peas are garden vegetables that belong to the legume plant family. Alfalfa, clover, vetch, soybeans and dry beans, also legumes, are important forage and seed field crops in Nebraska.

Peas are native to a region extending eastward from Ethiopia into middle Asia where they have been grown for more than 5,000 years.

Results from 10 years of research trials between 1943 and 1966 show that peas may be grown successfully in all regions of Nebraska when planted at the correct time and given proper care.[1]

Peas require relatively small space, grow quickly (55-72 days) and provide "garden fresh" quality food during late spring and early summer. They retain much of their quality when preserved by freezing or canning. Ten-20 feet of row (1 pkt. of seed) usually will produce enough fresh peas for the seasonal needs of one person.

An additional 20-30 feet should be planted per person if peas are desired for canning or freezing. One pound of seed will plant 100 feet of row.

Requirements—Peas are a cool season crop. They germinate at relatively low temperature and tolerate light frost but must be planted so they mature before hot weather begins. Peas grow well on any good garden soil but good drainage is essential. Well-drained clay loam or silt loam soils are preferred. Sandy loam soils permit earlier planting and harvest but should not be so excessively well drained that they are droughty.

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[1]Werner, H. O. (1947) Horticulture Progress Report No. 9, Honma, Shigemi (1954) Horticulture Progress Report 25, and Neild, R. E., D. S. Nuland and J. O. Young (1967) Misc. Publ. 18, Agriculture Experiment Station, University of Nebraska.

Varieties—Garden peas are grouped into types based on the seed: smooth- and wrinkle-seeded.

Smooth-seeded types mature earlier, contain less sugar, are smaller and are firmer when canned than wrinkle-seeded types. They are frequently labeled as "early June peas" as a canned product. Because of their higher sugar content, wrinkled-seeded peas tend to shrivel as seeds become dry. They produce larger, sweeter peas than the smooth-seeded type.

Wrinkle-seeded varieties with dark colored skins are preferred for freezing. Varieties range from about 55-72 days from planting to harvest. Vine length may range from 1½ to over 4 feet. Shorter types require less space, need not be grown on a trellis and are less subject to downy mildew disease.

If you enjoy oriental food you will want to grow varieties such as Burpee Sweet Pod or Dwarf Gray Sugar whose unshelled tender sweet pods are eaten. Characteristics of some varieties that have performed well in Nebraska are listed in Table 1.

Soil Preparation and Fertilizer—Peas do best on soil that has been plowed or spaded in the fall so that it is allowed to "mellow" with freezing and thawing action over winter. Such ground is more quickly and easily prepared in early spring, which is important for timely planting. Do not work the soil when it is wet. Squeezing a handful makes a good test. It should crumble but not feel sticky.

Peas show less response to fertilizer than other vegetables but may respond to nitrogen. This is particularly true on soil low in organic matter that has not received recent application of manure or compost. In such cases 2-4 pounds of ammonium nitrate or 2½-6 pounds of ammonium sulfate per 1000 square feet should be broadcast and worked into the soil ahead of planting. A well-prepared, even seed bed is important so that the peas will germinate and grow to harvest uniformly.

Planting—Plant seed 2 inches deep at a 1-2 inch spacing in rows 2-4 feet apart. Use the wider row spacing for varieties with long vines or to facilitate the use of power cultivating equipment. A strong cord stretched taut between two stakes will help keep rows straight and parallel while a 2" furrow is made with the edge of a hoe or while seed is sown with a planter. Varieties with long vines are better when grown on a trellis or fence.

Peas may also be planted with a grain drill in rows 7 inches apart. Two-4 bushels of seed will plant one acre depending on seed size and

germination. Adjust drill to plant 18-20 plants per yard of row. Earliest and latest planting dates and earliest and latest harvest dates for different regions of the state are given in Table 2.

Peas mature rapidly after pods are set. Once harvest maturity is reached they remain in suitable quality for eating only 2-4 days depending on temperature. A planting of varieties having different days to maturity will provide a harvest season of about 10 days.

For example, Alaska, Little Marvel, Frosty, Wando or Perfected Freezer, all planted on March 25 in eastern Nebraska, will provide quality peas for harvest over a 10- to 12-day period beginning about June 6. Successive plantings of higher-yielding, later-maturing varieties such as Wando or Perfected Freezer should be used to extend the harvest season into July.

Suggested planting schedules involving varieties with different maturities for peak harvest every 4 days for different regions of Nebraska are given in Table 3.

The second planting time in eastern and central Nebraska and first planting time in the Panhandle usually produce highest yields. These times should be used when peas are grown for canning and freezing.

Weed Control—Hoeing and cultivating are preferred methods for controlling weeds in small gardens. Potential weed problems may be prevented by proper seed bed preparation and timely cultivation. Herbicides are available for use in large plantings, particularly when the seed has been planted with a drill.

Randox (CDAA) at a rate of 6 tablespoons per 1000 square feet applied at planting is effective in controlling many grassy weeds. Chlorpropham (CIPC) applied at a rate of 6 tablespoons of active chemical per 1000 square feet at planting is effective in controlling many broadleaf and grassy weeds. Randox can cause skin irritation. Be careful when using this chemical.

Diseases—Powdery mildew is a fairly common disease of peas. It is a white powdery growth that develops during warm weather and occurs mostly on the upper surfaces of the leaves. Karathane or Mildex applied at first sign of mildew with a second application in 10-14 days should give control. A serious root rot may develop if peas are grown too frequently on the same soil. This may be particularly serious if the soil is poorly drained. Crop rotation is the best prevention. Avoid planting peas more frequently than once every 5 years on the same plot of soil.

Insects—Aphids, small green-colored fleshy insects, may occur in some years, usually just before peas begin to bloom. These sucking insects are best controlled when sprayed with 2 teaspoons of 57% emulsifiable Malathion or 2 teaspoons of 25% emulsifiable Diazinon per gallon of water when they appear. **Read the label carefully before using agricultural chemicals.** Wash with soap and water immediately after using. Store leftover chemicals in the original container out of the reach of children. Safely dispose of empties.

Harvesting—The quality of maturing peas changes more quickly than other vegetables. Increase in yield accompanies an increase in size as peas mature. However, sugar decreases, starch increases and peas become harder as they grow larger, so increasing yield is offset by a decline in quality.

Peas may change from good to poor quality in only one day during warm weather. Timely harvest is critical.

During cooler weather, usually present with early plantings, peas are ready for harvest 16-20 days from blooming. Only 12-16 days may be required from blooming for later plantings that mature during warmer weather. Peas may be repeatedly harvested by removing only the largest, oldest lower pods from the plant. This method results in highest yields but requires more labor.

Growing peas on a trellis or fence makes the pods easier to see and facilitates this kind of harvest. A second method involves a single harvest of pulling plants after the majority of the peas are mature, then removing the pods.

At maturity pods should be plump and peas readily removed while leaving the small short stem that attaches each to the suture or rib between halves of the open pod. The peas should not be watery yet not sufficiently hardened to separate into two halves when squeezed between the fingers. A few large relatively mature peas can be tolerated when offset by smaller tender peas usually present when the single pulled vine harvest is made.

Peas for canning or freezing should be allowed to mature to a firmer condition than when prepared fresh for the table.

Quality of peas continues to decline after picking. It is best to harvest in the cool of the morning rather than the heat of the afternoon. Shell and rinse the peas in cold water as soon as possible after harvest. Refrigerate for later use. Pea vines and pods make

excellent compost and will decompose rather quickly when spaded into the soil.

Table 1. Characteristics of garden pea varieties.

Variety	*Days to Harvest*[1]	*Vine length*	*Remarks*
Alaska	55-60	24-28"	Small peas, lower sugar, firmer when canned.
Little Marvel	60-64	18-24"	Early sweet variety having dependably good yield.
Frosty	64-66	26-28"	Good fresh and for freezing.
Wando	69-72	28-30"	More tolerant of hot weather, best for late planting.
Perfected Freezer	69-72	28-30"	High yielding freezer pea.
Dwarf Sugar	64-66	24-30"	Early small pods.
Burpee Sweet Pod	68-70	40-48"	Should be given supports.

[1]Shorter or longer time may be required if weather is hottor or cooler than normal.

Table 2. Earliest and latest planting and harvest dates.

	Planting		*Harvest*	
	Earliest	*Latest*	*Earliest*	*Latest*
East	March 25	May 22	June 6	July 10
Central	March 28	May 25	June 9	July 13
Panhandle	April 7	May 28	June 22	July 20

Table 3. Schedule for planting peas for peak harvest 4 days apart.

Planting	*Variety group*[1]	*Planting date*	*Estimated harvest date*
		Eastern Nebraska	
1	55-60	March 25	June 6
	60-64	March 25	June 10
	64-66	March 25	June 12
	69-72	March 25	June 16
2	69-72	April 16	June 20
3	69-72	April 26	June 24
4	69-72	May 4	June 28
5	69-72	May 11	July 2
6	69-72	May 17	July 6
7	69-72	May 23	July 10
		Central Nebraska	
1	55-60	March 28	June 9
	60-64	March 28	June 13
	64-66	March 28	June 15
	69-72	March 28	June 19
2	69-72	April 17	June 23
3	69-72	April 28	June 27
4	69-72	May 7	July 1
5	69-72	May 14	July 5
6	69-72	May 20	July 9
7	69-72	May 26	July 13
		Panhandle	
1	55-60	April 7	June 22
	60-64	April 7	June 26
	64-66	April 7	June 28
	69-72	April 7	July 2
2	69-72	April 30	July 6
3	69-72	May 10	July 10
4	69-72	May 18	July 14
5	69-72	May 24	July 18
6	69-72	May 30	July 22

[1] Days to harvest.