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SP291-P-Guide to Warm-Season Vegetables

The University of Tennessee Agricultural Extension Service

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Vegetables

Guide to Warm-Season Garden Vegetables

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Some of these vegetable varieties and planting dates are not the same as those grown by commercial growers. Commercial growers should be sure to consult the appropriate literature for commercial varieties and planting dates.

Warm-season vegetables require warm soil and air temperatures if they are to germinate, grow and mature properly. They will not tolerate any frost and may be severely damaged by prolonged temperatures as much as 15 degrees above freezing. They are deep-rooted and generally quite resistant to drought. However, irrigation may increase yields. They are frequently grown for their fruit or seed and thus do not require excessive amounts of nitrogen. Fruiting may, in fact, be delayed by excessive nitrogen fertilization.

Warm-season vegetables are generally planted after danger of frost in the spring and grown during the heat of summer. Some will survive and produce into the fall, but most have a relatively long growing season and must be planted no later than early July. Plant warm-season vegetables near the early end of the recommended

planting interval in West Tennessee. Plant later in Middle and East Tennessee. Gardeners at high elevations may need to plant near the very end of the recommended planting interval. Use the closer recommended row spacings only in compact gardens to be worked by hand. The recommended spacings between plants in rows should not be reduced.

Remember that estimated days to first harvest, length of the harvest season and yields all are subject to considerable variation. The exact figures will depend on the varieties grown, the cultural procedure used, the weather and many other factors. More detailed gardening information is available in the other factsheets in this series, in PB 901, "Growing Vegetables in the Home Gardens" and PB 1228, "Gardening for Nutrition." These may be obtained by Tennessee residents at no charge from local Extension offices.

The following table lists commonly grown warm-season vegetables, recommended varieties, spacings, planting dates and harvest information.



Guide to Warm-season Garden Vegetables

| Vegetable | Variety | Planting interval | Seed or plants per 100 foot row | Inches between rows | Inches between plants | Days to first harvest | Length of harvest season | Yields per 100-foot row |
|--------------------|---|-------------------|---------------------------------|---------------------|-----------------------|-----------------------|--------------------------|-------------------------|
| Beans, Bush Snap | Blue Lake, Top Crop, Derby, Roma II, Half runners, Provider, Tendergreen Improved | Apr.10 to June 20 | 1/4 lb. seed | 24 to 36 | 3 to 4 | 52 to 60 | 2 weeks or more | 80 to 120 lbs. |
| Beans, Pole | Kentucky Wonder, Blue Lake, McCaslan | Apr.10 to June 20 | 1/4 lb. seed | 36 to 48 | 3 to 4 | 60 to 65 | 5 to 6 weeks | 100 to 150 lbs. |
| Beans, Bush Lima | Fordhook 242, Henderson Bush, Dixie Butterpea | May or June | 1/2 lb. seed | 24 to 36 | 3 to 4 | 65 to 75 | 3 weeks | 20 to 30 lbs. shelled |
| Beans, Pole Lima | King of the Garden, Sieva | May or June | 1/2 lb. seed | 36 to 48 | 3 to 4 | 80 to 90 | 4 weeks. | 25 to 50 lbs. |
| Cantaloupe | Burpee Hybrid, Gold Star, Classic, Harper Hybrid, Pulsar, Athena, Ambrosia | May | 1/4 oz. seed | 72 | 24 | 80 to 90 | 3 weeks | 100+ melons |
| Corn, Sweet | Silver Queen, (white), Golden Queen, Kandy Korn | Apr. 1 to June 1 | 1/4 lb.seed | 36 | 8 to 12 | 80 to 95 | 7 to 10 days | 90 to 120 ears |
| Corn, High Sugar | How Sweet It Is, Honey 'n' Pearl, Incredible | Apr.15 to June 1 | 1/4 lb.seed | 36 | 8 to 12 | 80 to 95 | 10 to 15 days | 90 to 120 ears |
| Cucumber, Pickling | Country Fair, Calypso, Carolina, National Pickling | May | 1/4 oz. seed | 72 | 12 | 50 to 55 | 3 to 6 weeks | 115 to 250 lbs. |
| Cucumber, Slicing | Sweet slice, Burpless. Sweet success, Tasty Green | May or June | 1/4 oz. seed | 72 | 12 | 50 to 65 | 3 to 6 weeks | 115 to 250 lbs. |
| Eggplant | Black Beauty, Ichiban, Dusky, Millionaire | May | 50 plants | 36 | 24 | 65 to 80 | 2 months or more | 75 to 150 lbs. |
| Okra | Clemson Spineless, Lee, Cajun Delight | May 5 to May 20 | 1 ounce seed | 36 | 6 to 12 | 50 to 60 | 7 to 9 weeks | 50 to 100 lbs. |
| Peas, Field | Mississippi Silver, Pink Eye Purple Hull, Texas Creme 40, Whipoorwill, Zipper, Dixielee | May or June | 1/4 lb. seed | 36 | 4 | 65 to 80 | 3 to 5 weeks | 30 to 40 lbs. |
| Pepper, Sweet | California Wonder, Gypsy, Bell Boy, Golden Summer, Big Bertha, Sweet Banana | May or June | 60 plants | 36 | 18 to 24 | 55 to 80 | 2 to 3 months | 50 to 75 lbs. |

Guide to Warm-season Garden Vegetables

| Vegetable | Variety | Planting interval | Seed or plants per 100 foot row | Inches between rows | Inches between plants | Days to first harvest | Length of harvest season | Yields per 100-foot row |
|----------------|--|--------------------|---------------------------------|---------------------|-----------------------|-----------------------|--------------------------|-------------------------|
| Pepper, Hot | Jalapeno, Cayenne, Habanero, Hungarian Wax | May or June | 60 plants | 36 | 18 to 24 | 60 to 70 | 2 to 3 months | 10 to 25 lbs. |
| Potato, Sweet | Centennial, Jewel, Puerto Rico, Beauregard | May | 100 slips | 36 | 12 | 110 to 120 | 5 months stored | 75 to 125 lbs. |
| Pumpkins | Autumn Gold, Sugar or Pie, Howden's, Jack 'O' Lantern, Wizard, Spirit | May | 1 oz. seed | 120 to 144 | 48 | 100 to 120 | 4 months stored | 40 to 50 pumpkins |
| Squash, Summer | Dixie, Early Summer, Crookneck, zucchini types, Gold Bar | May or June | 1 oz. seed | 48 to 60 | 12 to 24 | 40-50 | 6 weeks | 100 to 150 lbs. |
| Squash, Winter | Cushaw, Pink Banana, butternut types, acorn types | May or June | 1 oz. seed | 72 to 96 | 24 to 36 | 90-110 | 4 months stored | 50 to 200 lbs. |
| Tomatoes | Big Boy, Betterboy, Celebrity, Early Girl, Sweet Million, (cherry) Lemon Boy, Sweet Cluster, Enchantment | Apr. 10 to June 10 | 50 plants | 48 | 24 | 70-80 | 8 weeks or more | 200-300 pounds |
| Watermelon | Jubilee, Crimson Sweet, Charleston Gray, Allsweet, Sweet Favorite | May | 1/4 oz. seed | 120 to 144 | 48 | 80-90 | 3 weeks | 20-25 melons |

The following tips will be helpful in growing warm-season vegetables:

While warm-season vegetables generally perform better during warm weather than during cool weather, extreme heat can limit production. This is especially true of tomatoes, beans and peppers, which tend to drop their flowers when temperatures above 90 degrees are combined with high humidity. Large amounts of nitrogen will also cause flowers and small fruit to drop. Do not apply ammonium nitrate sidedressings to tomatoes, peppers or okra until after fruit begins to set.

Beans and corn are sensitive to cool soils. Seed tends to rot rather than germinate if soils are cool and wet. Okra, peppers and eggplant require even warmer soils (about 70 degrees) to germinate quickly. Soaking seed overnight may help, but do not soak seed more than 24 hours before planting.

Half-runner beans are highly susceptible to virus diseases. Control insects to reduce the severity of this problem. Kentucky Wonder pole beans have low quality but are still very popular with home gardeners. It is also important to control cucumber beetles on cucumbers and cantaloupe to reduce the incidence of bacterial wilt of these crops. Specific control recommendations are found in PB 595, "You Can Control Garden Insects."

Squash, cucumbers, cantaloupes and other vine crops require pollination by insects to bear fruit. Apply insecticides late in the day to reduce the effect on honey bees.

The Supersweet corns frequently must be isolated from other corns. This can be accomplished by spacing corn plantings 100 or more feet apart or by timing the plantings so they do not shed pollen at the same time. They are especially difficult to get up when the soil temperature is below 60 F.

Dig sweet potatoes before cool, fall rains. Cure them at 85 degrees and 90 percent relative humidity, and store them at 55F and 65 percent relative humidity.

Lime soils properly to reduce blossom-end-rot of tomatoes, peppers and watermelon. Mountain Supreme tomato is somewhat resistant to early blight.

The following Tennessee Agricultural Extension Service publications also contain information useful to home gardeners:

PB 595 You Can Control Garden Insects
PB 819 Vegetable Transplant Production
PB 901 Growing Vegetables in Home Gardens
PB 902 Growing Small Fruits in Home Gardens
PB 1155 Honey Bees and Pesticides
PB 1215 Disease Control in the Home Vegetable Garden
PB 1228 Gardening for Nutrition
PB 1391 Organic Vegetable Gardening
SP 277-K Disease Resistance in Recommended Vegetable Varieties

SP 291-A Growing Vegetable Transplants for Home Gardens
SP 291-B Growing Vegetables from Seed
SP 291-C Soil Preparation for Vegetable Gardens
SP 291-D Care of the Vegetable Garden
SP 291-E Growing Sweetcorn in Home Gardens
SP 291-G Fall Vegetable Gardens
SP 291-I Weed Control in Home Gardens
SP 291-L Fresh Vegetable Storage for the Homeowner
SP 291-N Raised Bed Gardening
SP 291-O Guide to Spring-Planted, Cool-Season Garden Vegetables
SP 291-Q Rhubarb in Home Gardens
SP 291-R Growing Asparagus in Home Gardens

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store, or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label. Persons who do not obey the law will be subject to penalties.

Disclaimer Statement

Pesticides recommended in this publication were registered for the prescribed uses when printed. Pesticide registrations are continuously reviewed. Should registration of a recommended pesticide be canceled, it would no longer be recommended by the University of Tennessee. Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others which may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product.

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Charles L. Norman, Dean