Kansas Forest Service offers low-cost tree and shrub seedlings for use in conservation plantings. These plants are 1 or 2 years old, and their sizes vary from 12 to 18 inches, depending on species.

Orders will be accepted the first week of December through 5 p.m. on the first Monday in May. Order early to be sure of getting the items you want.

Before submitting an order, please check the current list of available species and prices. Order forms and price sheets are available at your local K-State Research and Extension office, Natural Resources Conservation Service office, Conservation District office, and on our Web site www.kansasforests.org.

The minimum order is 50 bare-root seedlings or 25 container-grown seedlings. Bundles and other items must be ordered in whole units. Orders for a partial unit (½ unit, for example) or a mixed unit (such as ½ unit of Austrian pine and ½ unit of Ponderosa pine) will not be accepted.

In the event that some items ordered are sold out, we reserve the right to ship any remaining items ordered.

Approved uses

This cooperative state and federal program encourages landowners to plant trees and shrubs for conservation purposes. The seedlings may not be used for landscape (ornamental) plantings or resale for landscaping.

Approved uses of these plants include:

- Windbreak — one or more rows of tree and/or shrub seedlings planted for wind protection.
- Woodlot — an area of land planted to trees primarily managed for the production of timber products.
- Riparian planting — a tree and/or shrub planting adjacent to creeks or rivers for bank stabilization and improvement of water quality.
- Wildlife habitat — a group of tree and/or shrub seedlings planted to provide habitat for wildlife.
- Christmas trees — a group of tree seedlings planted for cutting as Christmas trees.

Correct address a must

Use a legal address including the first five digits of the ZIP code, street numbers and names including rural areas where RFD addresses have been converted, and apartment and suite numbers when applicable. Kansas Forest Service will not be responsible for delivery to inaccurate or incomplete addresses.

Delivery information

Order shipments, including bare-root and container-grown seedlings, will begin in mid-March as the weather permits.

All shipments will be shipped to the shipping address shown on the order form. Persons living in Riley County are asked to pick up their order at the Kansas Forest Service office.

Pick up orders: Check the “pick up” box on the form if you wish to pick up your order at Kansas Forest Service, 2610 Claflin Road, Manhattan. You will not be notified when your order is ready. Orders can be picked up from mid-March through the first Monday in May. Please call 1-888-740-8733 before coming to be sure that the items you ordered are on hand.

Our pick-up hours are Monday through Friday, 8 to 11:30 a.m. and 1 to 4:30 p.m.

All orders that have not been picked up or are being held for any reason at 5 p.m. on the first Monday in May will be shipped the following weekday. Shipping charges will be added to the order and will be the responsibility of the customer.

Claims and cancellations

Claims must be made within 60 days of receiving the plants. Adjustments, refunds, and cancellations are made at the discretion of the Kansas State Forester. Kansas Forest Service does not warranty the survival of the plants and is not responsible for economic loss by the customer.

Container-grown seedlings vs. bare-root seedlings

Container-grown seedlings are grown in a greenhouse where temperature, humidity, light, carbon dioxide, and nutrients are carefully controlled. When seedlings are removed from the container, the roots hold the soil in a plug. The seedling roots and soil remain undisturbed when planted, assuring that growth will be nearly uninterrupted.

The advantages of container-grown seedlings compared with bare-root seedlings are:
- Improved survival and first-year rate of growth under most conditions.
- Extended spring planting season.
- Greater flexibility in scheduling tree planting around soil and weather conditions and work schedule.
- Easier to plant properly.
  Only selected species are offered as container-grown seedlings.
  Bare-root seedlings are grown 1 to 2 years in a field nursery, then lifted and shipped without soil on the roots.

**Status of order**
To check on the status of your order, call the agency that helped you with your order or Kansas Forest Service, 2610 Claflin Rd., Manhattan, KS, 66502–2798 (1-888-740-8733).

**Windbreak spacing**

**Between rows**
Western Kansas — 12 to 25 feet.
Central and eastern Kansas — 10 to 20 feet.
Large, fast-growing trees statewide — 20 feet from slow-growing trees and shrubs.

**Within rows**

**Single-row plantings**
- Pines — 8 to 12 feet.
- Redcedar — plant at 6 feet, then thin to 12 feet, or plant at 8 feet and do not thin.
- Juniper — plant at 6 to 8 feet (normally no thinning needed).
- Shrubs — 3 to 6 feet.
- Deciduous trees — 8 to 15 feet.

**Multiple-row plantings**
- Pines
  - Windward row — same as in single-row planting.
  - Interior rows — 8 to 12 feet.
- Redcedar and juniper
  - Windward row — same as in single-row planting.
  - Interior rows — 8 to 12 feet.
- Shrubs
  - Windward — 3 to 5 feet.
  - Leeward — 3 to 6 feet.
- Small deciduous trees — 6 to 12 feet.
- Medium to tall deciduous trees
  - Western Kansas — 6 to 20 feet.
  - Central Kansas — 6 to 20 feet.
  - Eastern Kansas — 6 to 20 feet.

**Woodlot spacing**
- Firewood — 6 × 10 feet or 8 × 8 feet.
- Timber — 10 × 10 feet to 15 × 15 feet.

**Riparian plantings**
- Shrubs — 1½ to 4 feet between plants, 8 to 10 feet between rows.
- Deciduous trees — 8 to 10 feet between plants and rows.

**Wildlife habitat spacing**
Same as in windbreaks.

**Christmas tree spacing**
6 × 6 feet to 7 × 7 feet.

**Technical assistance**
Several sources of free technical assistance are available for designing and managing your conservation planting:

**Kansas Forest Service**
- Manhattan, 2610 Claflin Rd., 66502 (785-532-3300)
- Hays, 1232 240th Ave., 67601 (785-625-3425 ext. 220)
- Dodge City, 107 Layton, 67801 (620-227-2392)
- Hutchinson, 9 West 28th Ste. B, 67502 (620-663-3501)
- Manhattan, 1125 Westport Dr., 66502 (785-776-5182)
- Topeka, 2914 SW Plass Court, Ste. C, 66611 (785-267-2275)
- Valley Falls, 318 Broadway, 66088 (785-945-6147)
- Chanute, 308 West 14Th St., 66720 (620-431-1530)

Your local K-State Research and Extension office; your County Conservation District; your local representative of the Kansas Department of Wildlife and Parks also can lend technical assistance.

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*This windbreak design is for prevailing winds from the north and west. Snowdrifts form downwind from the windbreak.*
**Shrubs**

**American Plum**

Used for wildlife habitat and erosion control. Forms thickets and grows well on most soils. Reaches a mature size of 6 to 12 feet and bears edible fruit.

**Caragana (Peanut Shrub)**

Used to attract grasshoppers for game birds and provide cover for upland game birds. Grows best on dry, well-drained soils and suffers few diseases. Reaches a mature size of 6 to 12 feet and recovers well from grasshopper damage.

**Choke Cherry**

Used for wildlife habitat and erosion control. Forms thickets and grows well on most soil conditions. Reaches a mature size of 6 to 10 feet and bears edible fruit.

**Fragrant Sumac**

Moderate growth on dry, well-drained soils. Excellent for wildlife habitat and is drought-tolerant. Reaches a mature size of 3 to 6 feet.

**Golden Currant**

Moderate growth on dry, well-drained soils. Excellent for wildlife habitat and is drought-tolerant. Reaches a mature size of 3 to 5 feet.

**Lilac**

Slow growth on dry, well-drained soils. Used in windbreaks and for wildlife habitat. Long-lived with profusion of purple flowers. Reaches a mature size of 8 to 12 feet.
## Shrubs

**Peking cotoneaster**
- Moderate growth on well-drained soils. Used in windbreaks and wildlife habitat. Attractive shrub that reaches a mature size of 5 to 7 feet.

**Sand Hill Plum**
- Grows naturally on dry, sandy, well-drained soils. Forms thickets and serves as excellent wildlife habitat. Reaches a mature size of 3 to 4 feet and bears edible fruit.

## Deciduous Trees

**Baldcypress**
- Grows best on wet, well-drained soils, but will tolerate seasonal droughts. Do not plant on alkaline soils. Used for stream bank stabilization and reaches a mature size of 60 to 100 feet.

**Black Walnut**
- Limited to deep, well-drained, fertile soils. Used for timber and firewood production and wildlife habitat. Reaches a mature size of 50 to 90 feet.

**Bur Oak**
- Slow to moderate growth on most soil conditions. Long-lived and durable. Used for windbreaks, timber production, and wildlife habitats. Reaches a mature size of 50 to 80 feet.

**Chinkapin Oak**
- Slow to moderate growth. Prefers moderate to slightly acidic dry, well-drained soils. Its acorns are eaten by a variety of wildlife. Reaches a mature size of 30 to 60 feet. Produces a low spreading crown and low branching pattern. Has few pest problems.
Deciduous Trees

**Cottonwood**
Rapid growth on wet, well-drained soils. Used for windbreaks, streambank stabilization, timber and firewood production. Well-suited for turkey and deer habitat. Reaches a mature size of 70 to 100 feet.

**Green Ash**
Moderate growth on moist, well-drained soils. Not well-suited for dry upland sites. Used for windbreaks and firewood and timber production. Reaches a mature size of 35 to 60 feet.

**Hackberry**
Fast growth on deep, dry, well-drained, fertile soils. Used in windbreaks, wildlife habitat, and timber production. Reaches a mature size of 45 to 70 feet.

**Honeylocust**
Moderate to fast growth on dry, well-drained soils. Drought-tolerant and about 90 percent are thornless. Used for windbreaks and firewood production. Reaches a mature size of 30 to 60 feet.

**Lacebark Elm**
Used in windbreaks and grows best on dry, well-drained soils. Drought-tolerant and resistant to elm leaf beetle and Dutch elm disease. Reaches a mature size of 30 to 35 feet.

**Northern Red Oak**
Moderate growth on well-drained soils. Used for woodlots, wildlife habitat, firewood production, and windbreaks. Reaches a mature size of 50 to 70 feet.
Deciduous Trees

**Pecan**
Requires moist, well-drained soils for nut and timber production and rapid growth. Kansas or western Missouri seed source. Reaches a mature size of 80 to 100 feet.

**Redbud**
Grows best on well-drained soils and used in windbreaks. Profusion of bright pink flowers and reaches a mature size of 10 to 20 feet.

**Russian Mulberry**
Fast growth on dry, well-drained soils. Small tree used for wildlife habitat. Reaches a mature size of 15 to 20 feet.

**Sawtooth oak**
Grows quickly on well-drained soils and produces acorns much earlier than other oak species. A red oak that is especially good for wildlife and has no serious pests. Reaches a mature size of 50 to 60 feet.

**Silver Maple**
Grows quickly on moist, well-drained soils. Do not plant on alkaline soils. Used for firewood and timber production and streambank stabilization. Reaches a mature size of 70 to 80 feet.

**Sycamore**
Rapid growth on moist, well-drained soils. Serves well for a den and roost tree. Good riparian tree that reaches a mature size of 50 to 80 feet.
<table>
<thead>
<tr>
<th>Evergreen Trees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Austrian Pine</strong></td>
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<tr>
<td><img src="image" alt="Austrian Pine" /></td>
</tr>
<tr>
<td>Moderate growth on dry, well-drained soils, but is able to adapt to most other soils. Used for windbreaks and Christmas trees. Drought-tolerant and reaches a mature size of 30 to 50 feet.</td>
</tr>
<tr>
<td>Adapted Statewide</td>
</tr>
</tbody>
</table>

| **Eastern Redcedar** |
| ![Eastern Redcedar](image) |
| Moderate growth on dry, well-drained soils. Basis for windbreaks and wildlife habitat. Very drought-tolerant. Reaches a mature size of 30 to 50 feet. |
| Adapted Statewide |

| **Eastern White Pine** |
| ![Eastern White Pine](image) |
| Grows best on well-drained soils and is used for windbreaks and Christmas trees. Reaches a mature size of 50 to 60 feet. |
| Adapted to Eastern Third of Kansas |

| **Oriental Arbovitae** |
| ![Oriental Arbovitae](image) |
| Moderate growth on well-drained soils. Aromatic tree used in windbreaks. Reaches a mature size of 30 to 50 feet. |
| Adapted Statewide |

| **Ponderosa Pine** |
| ![Ponderosa Pine](image) |
| Moderate growth on dry, well-drained soils. Most drought-tolerant pine and used in windbreaks. Reaches a mature size of 40 to 50 feet. |
| Adapted to Western Two Thirds of Kansas |

| **Rocky Mountain Juniper** |
| ![Rocky Mountain Juniper](image) |
| Grows best on dry, well-drained soils. Similar to redcedar, but subject to disease in eastern Kansas. Reaches a mature size of 20 to 30 feet. |
| Adapted to Western Quarter of Kansas |
Southwestern White Pine

Grows best on dry, well-drained soils. Used for Christmas trees and requires more attention than Austrian or Ponderosa Pines during establishment. Reaches a mature size of 35 to 50 feet.

Bundles

Tree bundles are sets of trees that can be planted for a specific purpose.

Songbird bundle — Partially financed by Nongame Wildlife Checkoff on state income tax forms. Contains three redcedar, three Peking cotoneaster, three redbud, five fragrant sumac and four golden currant seedlings.

Quail bundle — Endorsed by Quail Unlimited. Contains 25 each American plum, fragrant sumac and Peking cotoneaster.


Other Information

Landowners interested in obtaining more information on how to increase the success of their conservation tree and/or shrub planting may find the following publications of interest.

Conservation Tree Planting Schedule, L-871
Tips On Planting Trees And Shrubs,
Tree Planting Guide, L-596
Weed Control Options In Tree Plantings, L-848
Windbreaks For Kansas, MF-2120

Chemical Weed Control in Tree Plantings, MF-656
Fabric Mulch for Tree and Shrub Plantings, MF-2216
Trees and Shrubs for Difficult Sites, MF-2205
Living Snow Fences in Kansas, L-744
Windbreaks for Wildlife, MF-805

These, as well as several other publications relating to Kansas Forest Service’s Community Forestry, Rural Forestry, and Fire Management programs are available by calling Kansas Forest Service at 785-532-3300, or by visiting our Web site at www.kansasforests.org and selecting “Publications” at the bottom of our home page.