

# Nanking Cherry in the Garden

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## Introduction

Nanking Cherry (*Prunus tomentosa*) is native to northern China and naturalized in Japan, Russia, and other northern regions of the continent. It has become a staple back yard garden plant in Russia and much of Eastern Europe. Initially introduced to the United States in 1882, it was well received and there was great interest in developing cultivars for commercial fruit production. Breeding programs were begun in the 1920s in the United States, Canada, and Russia with cultivars selected for larger and sweeter fruit with smaller pits or more pulp. However, by the 1940s interest had turned to other crops and the Nanking cherry sank out of the American garden spotlight in favor of fruits with easier harvest, longer shelf-life, and wider marketability. Currently there are no known cultivars in production, and plants are sold as seedlings from adult shrubs. Seedlings vary from source to source in taste, fruit size, plant growth, plant size and other traits.

Nanking cherries are sometimes referred to as Manchu cherry, downy cherry, mountain cherry, Mongolian cherry, or Chinese bush cherry, but are not to be confused with the very similar Meader Bush cherries (*Prunus japonica* x *Prunus jacquemontii*).

Due to their region of origin, Nanking cherry are particularly well adapted to nearly every climate and condition, including extreme cold, extreme heat, arid conditions, high elevation, and nearly all soil types. They are well adapted to the

Intermountain West's climate and conditions, and can produce fruits even if flowers are exposed to late spring frosts.



## Plants

The Nanking cherry is part of the genus *Prunus* along with other cherries, and are deciduous, cold hardy, and vigorous. With proper care and maintenance, they can live up to 50 years. Without care, plants have reportedly lived 20 years or more. Bushes are very upright and multi-stemmed with some reaching 15 feet tall and wide, although at maturity, most range between 8 and 12 feet. Plants grown from seed may develop a deep taproot, and are very drought tolerant after initial establishment.

The leaves are 1 to 1 ½ inches wide and 3 inches long, serrated, and alternating on stems. They are also covered with a white, downy fuzz which is the origin of one of its common names of ‘downy cherry’. It is an early spring bloomer, typically around the same time of year as apricots. Pink buds become a profusion of dense and quite ornamental white flowers that emerge before leaves. Flowers develop on 1-year-old and older growth and with its tightly spaced nodes it has been described as looking like “cotton candy” when in bloom. Flowers are very frost tolerant. The Nanking cherry will often set full crops when other fruits are lost to late-spring freezes. Fruit ripens in June and ranges from sweet to tart in taste. Most plants produce small fruits, only ½ inch in diameter, cherry shaped, and with a large pit inside.



The plants require cross pollination and must have two or more plants in the area. Because of the beauty of the bush, it is sometimes used as an edible hedge or windbreak. Due to its lack of current popularity in the United States, it may be difficult to locate at local nurseries. Some mail order nurseries sell bare root plants and will ship to Utah, and some sources sell Nanking cherry seeds. Seeds are the main propagation technique and homeowners can be successful growing them from seed. Remember when selecting plants that there are no standard cultivars, so fruit taste/size/shape will differ significantly between individual plants. Always choose reputable nursery sources and be sure to inspect plants on arrival for any damage, pests, and healthy plant tissue.

### How to Grow

**Propagation:** The plants are fairly easy to grow from seed. Seeds can be purchased from online

sources or collected from bushes. If collecting your own seeds, remove seed from fully ripe fruit. Wash immediately after removal and dry for a few days in a shaded, well-ventilated place before storage. Seeds require a period of 100 days of cold stratification. Cold stratification is when the seeds are kept in moist conditions at low temperatures (32 to 45 degrees F) prior to germination. This can be done by putting seeds in with wetted sand, sphagnum-peat moss, or vermiculite and checking moisture levels periodically. Stratification can be done in a refrigerator. In the spring, once the 100 days of stratification are complete, remove the seeds and plant outside or in pots. Alternatively, plant the seeds outside in the fall and allow natural temperatures to achieve stratification. Although this method is more simple than indoor stratification, moisture levels are more difficult to monitor and seeds may be eaten by rodents.

**Site Selection:** In its native habitat, Nanking cherry tolerate extreme temperature variation from -40 to 90 °F in a single season. They prefer arid weather, and are well suited to the Intermountain West. They will tolerate part-sun but prefer and will fruit more heavily with 8-hours or more of full sun exposure. Plants prefer alkaline soil, tolerating soil pH of 8.0 pH and possibly higher. Preference is for well-drained, sandy soils, but they adapt easily to most locations.

**Soil Preparation:** As with any new planting, pre-plant soil preparation is recommended. Have soil tested and add nutrients to the recommended specifications. Add organic matter to the soil as compost, manure or similar material and incorporate deeply. Control perennial weeds with non-residual herbicides or repeated tillage. Perennial weed control is much easier before planting.

**Planting and Spacing:** Fall is the best time to transplant Nanking cherries so the trees can establish over the late fall and spring before hot summer temperatures. However, spring, and even summer plantings are possible. If you plant during the summer, take extra care to make sure irrigation is adequate. Since there are no named cultivars, variation in plants grown from seed makes exact spacing recommendations difficult. Typically, 6 to 10 feet between plantings for hedges and windbreaks works well, or 8 to 15 feet between

stand-alone plants. This allows for easy access for pruning and harvest.

**Fertilization:** If phosphorus was low in the soil test, incorporating a high-phosphorus fertilizer before planting is recommended to help initial root development. Phosphorus is immobile in the soil (meaning a surface application does not move down in the soil) so incorporating it prior to planting is best. Although no specific fertilizer recommendations exist for Nanking cherry in Utah, using tart or sweet cherry fertilizer guidelines should work well. If shoot growth is stunted, nitrogen may be lacking. A spring application of 1/3 cup per plant of a 21-0-0 fertilizer or similar high N, low P and K fertilizer should provide adequate nutrients

**Irrigation:** During establishment, plants need frequent watering. However, once established, they have a fairly low water requirement. Mature (4 to 5-year-old) plants will need infrequent but deep soaks once or twice weekly at the height of summer

temperatures. Drip irrigation is best for conserving water and minimizing disease by reducing water on leaves, but the bushes will tolerate most watering techniques.

**Pruning:** Unless maintaining a hedge, Nanking cherries require little pruning. However, some yearly late-winter pruning will help keep good air circulation and keep branches productive. Start by removing any broken, damaged or diseased branches. Next, remove old center limbs to allow for optimal air circulation. Then remove any branches that cross or touch. In total, aim to remove 3 to 5 old canes per year.

### Problems

Information about pests specific to Nanking cherry in Utah is limited. Most likely, the same pests and diseases that attack tart and sweet cherries will affect Nanking plants. Refer to Table 1 for pests that affect cherries throughout Utah and may be a problem.

**Table 1. Common pests and diseases of cherries in Utah.**

Pest	Identification	Control
Spider Mite	Very small arthropod that typically feeds on the undersides of leaves. Stippled leaves are a sign of mite feeding. Heavy infestations will have fine, silken threads on leaves and stems. They can reproduce rapidly (1 to 2 weeks to complete a generation).	Low populations can be ignored and are often kept in check by predatory mites. If high populations occur, apply insecticidal soap or 1% horticultural mineral oil every 5 to 7 days. Keep dust levels low around plant to prevent high populations.
Western Cherry Fruit Fly	Adults have a distinct banding pattern on wings. They lay eggs by piercing through fruit about the time when fruit begins to turn salmon blush color. White maggots develop inside of fruit.	Monitor with Pherocon AM (yellow sticky) traps. To prevent egg-laying, treat when fruits develop salmon-blush color. Spinosad, carbaryl, malathion, and acetamiprid can be used.
Black Cherry Aphid	Small black aphids attack the leaves. Curled and sticky leaves along with black sooty mold are symptomatic.	Small numbers can be ignored. Use a dormant oil when buds begin to swell in the spring.
Coryneum blight	Round, purplish-black spots develop on leaves. Eventually, the spots fall out, leaving a small hole.	Prune and destroy infected plant tissue. Prevent irrigation water from hitting leaves. Copper spray applied in the fall is recommended for severe infections.

## Harvest & Storage

Plants will typically begin producing in years 3 and 4, with total yield increasing as the plant expands. Plants can produce from 15 to 50 pounds of fruit in one season depending on plant size and maturity. Fruit set is reliable and profuse. One of the limitations to commercial production is the difficulty in harvest that caused the plant to fall out of favor – berries are small and difficult to pick without damage. Fruit is very soft at peak ripeness, leading to a very short shelf life. Additionally, stems separate from the fruit when picked, causing a “weeping scar” that hastens fruit deterioration. Typically, freezing and storing is necessary. Nanking cherries can also be eaten fresh, although some can be quite tart, depending on the seedling. The fruit is excellent in jam, jelly, preserves, pies, and juice making.

## Additional Resources

- Janick, J., Reich, L., & Whipkey, A. 2007. Uncommon Fruits with Market Potential. Retrieved October 24, 2015.
- Nanking Cherry - *Prunus tomentosa*. North Dakota State University Tree Handbook. 2011. Retrieved September 19, 2016, from <https://www.ag.ndsu.edu/pubs/plantsci/trees/eb38.pdf>
- Reich, L. 2004. Uncommon fruits for every garden. Portland: Timber Press.

**Acknowledgments:** The authors appreciate the valuable assistance of Mr. Lee Reich in providing information and helpful edits to this fact sheet.

This project is funded in part by USDA-Risk Management Agency under a cooperative agreement. The information reflects the views of the author(s) and not USDA-RMA.



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This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Kenneth L. White, Vice President for Extension and Agriculture, Utah State University.