

# Asparagus Roots

Revised 2024

## Thermal Properties

	English	Metric
Specific Heat Above Freezing	0.88 Btu/lb*°F	3.70 kJ/(kg*°K)
Specific Heat Below Freezing	0.51 Btu/lb*°F	2.12 kJ/(kg*°K)
Latent Heat of Fusion	113 Btu/lb	263 kJ/kg

## Storage Conditions

Temperature	30 to 32°F (-1.1 to 0°C)
Relative Humidity	95 to 98%
Storage Period	3 to 4 months

Asparagus roots, called rhizomes or 'crowns', are stored for later planting, not for eating. Asparagus roots are like horseradish roots; they respire and heat up during storage. Because asparagus roots are not very perishable, they are typically slowly room cooled rather than rapidly precooled. However, they should not be stored in large unventilated bulk containers, because the center material can heat up to a damaging level rather than cooling; use ventilated bins or slatted crates, or woven or perforated bags to store asparagus roots. Trimming the roots to an 8-inch (20.3-cm) length from the crown will save space and reduce shipping weight. Trimming should be done prior to storage. The cut should be clean and not ragged.

Asparagus roots are quite susceptible to water loss, which results in limp texture and compromised sprouting and growing vigor when re-planted. For best results, asparagus roots should be stored at 30 to 32°F (-1.1 to 0°C) with a relative humidity as near to saturation as possible (at least 95%) to prevent loss of moisture. Holding the roots in rather small, closely woven, burlap bags works best, as there is some ventilation to keep them cool and moist. Small, perforated, polyethylene bags are also satisfactory for storage if the temperature is held at the recommended level. Fungicide dips of the roots have not been effective in controlling mold growth. Mold is best controlled by maintaining commodity temperature at 30 to 32°F (-1.1 to 0°C). Control of mold during storage is important for successful growth of asparagus upon replanting.

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Asparagus roots are sensitive to exposure to ethylene, which causes the asparagus buds to remain dormant. Asparagus roots must never be stored with fruits that produce substantial quantities of ethylene, including but not limited to apples, pears, and peaches. Asparagus roots should never be stored with grapes treated with sulfur dioxide (SO<sub>2</sub>) due to susceptibility to bleaching.

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GCCF is indebted to Dr. Jeff Brecht, Horticultural Sciences Department, University of Florida, for the review and revision of this topic.

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