

Winterizing Fruit Trees

By Haines Orchardist, Blythe Carter

Chilkat Valley Orchard Project
A program of the Chilkat Valley Historical Society, Inc.

Fruit trees in our northern climate can be damaged during winter. The list is long: frost, snow and wind-damage, and foraging wildlife. Here how to protect your investment.

Staking & Tying:

Strong winds can blow over a young tree. Drive in one or more stakes a foot or more from the trunk for stability. Soft, flexible rope, webbing or cloth should be used, not coarse or thin rope that will chafe and cause damage. Fix an open loop around the trunk so the tree has room to grow. Stakes can be wood, metal fence posts or thick rebar, 5-6 ft tall. Sink it one foot deep and form a line (two stakes) or, better yet, a triangle (three stakes) around the trunk.



Most fruit trees benefit from 3-5 years of staking, others their whole life—depending on the vigor of the rootstock, the quality of the soil and their location. Fruit trees on dwarf rootstocks, in particular, require long-term staking. In fact, lack of staking in their first few years is why a number of small apple trees around Haines, planted by Joe Poor some years ago, are tipping over. Staking also gives you a handy way to support and tie branches when there is a heavy fruit load, or during winter weather.

Snow can damage your tree just as effectively as a bear. Think of the retail Christmas tree, how it's wrapped and tied. The fast growing, spindly branches of Asian and hybrid plums can be tied in this fashion to protect them from winter snows, but most require less extreme manipulation.



Reinforce branches by tying smaller branches to larger ones and then tying these to the stakes, or tie branches from one side of the tree, straight across the middle to the opposite side, effectively causing them to brace one another. Of course, this cordage should be removed in the spring, but the strong stake, with a non-chafing loop can stay for years.

Painting the Trunk:

On a sunny winter day, sunlight can warm the south side of tree trunks causing the tissues to thaw. When the sun goes down and the temperature plummets below freezing, these tissues can “snap freeze.” This results in cracking and splitting of the cambium layer or even the whole trunk and often proves fatal, especially if this damage is repeated year after year. The resulting wounds are also an entry point for disease and other harmful organisms.

Painting the trunk significantly reduces the problem. **Using a 1:1 solution of water and white latex paint, coat the trunk up to the first set of branches.** The white reflects the sun and reduces the trunk's warming. The coating will last a few years, depending on growth. The paint also acts (somewhat) as a rodent deterrent (see

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below). Never use oil-based paint, which will poison your tree and, of course, dark colors defeat the purpose of reflecting the sun's energy.

Vole Protection--Cage and/or Wrap

Snow provides a fabulous winter habitat for the red-backed vole. These rodents tunnel along and find and eat the tender bark, ringing the entire trunk (photo at right).



The solution is simple. Make a cylindrical cage of ¼" wire hardware cloth (chicken wire mesh is too large) and fit it loosely around the trunk, leaving about two inches of space between the trunk and the wire for air circulation and future growth. The cage should be at least 2-feet tall, or up to the first permanent branch. Bury the bottom slightly in the soil without damaging the tree's roots. Check it several times throughout the year and clear out debris, organics and weeds. Removing it in the summer is fine. Depending on your tree's growth, this will have to be replaced or enlarged every few years.

Another preventive approach is the white plastic spiral wraps (photo above). The plastic winds around the trunk protecting from rodents and sun scald. Plastic spirals **MUST** be removed each spring and put on again in the fall as they can cause your trunk to rot during the summer. If ignored, they can bind on the growing trunk, strangling the tree, and they degrade in sunlight over time.



A vole weighing just a few ounces can break your heart and quickly kill a young tree. Around the planet in northern climates, grazing by voles and other rodents are common.

Top-Mulch in Fall

Fall mulching to guard against cold is not an absolute essential; fruit variety and rootstock selection are factors in cold heartiness. Top-mulching in fall certainly impart numerous important advantages—protecting roots from transient freeze-thaw and providing nutrients for the years to come. Lay down a 3-4 inch layer of deciduous leaves, seaweed, or composted **deciduous** wood chips, used/spoiled straw (from the chicken coop) or other compostable materials. Avoid fresh straw, or other rodents nest materials, so they don't move in next to your tree's tender, delicious trunk. Hurray for you livestock keepers who produce manure for mulch.

Spread your top-mulch from near the trunk, *outwards to edge of the drip line*. Carefully pull back all organic material from direct contact with the trunk by at least 6-inches. **No organic material, compost or mulch should be in contact with the trunk.** You can also mulch in spring. In Haines, fall mulching is done after the first frost, during leaf-drop around the last week of September or early October but before the first hard freeze.

Fall Pruning:

You're just tidying up here; this is not spring pruning--NOT the time to prune live wood. Perhaps the wind or wildlife snapped some branches during the growing season. Prune away dead or broken branches, before winter snows damage the tree further. For our climate, the major pruning occurs in April or May, after our capricious winters. See the pre-recorded Zoom presentation by Blythe Carter and Ed Buyarski: "The Power

of Pruning.” Find it at www.cvorchardproject.org/resources (Suggest scrolling forward till the program starts in earnest.).

Slow to go Dormant:

Fruit trees are not indigenous to Alaska and some don't seem to get the message when all the native plants start dropping their leaves. This can be devastating when snow builds up and causes leafy branches to break under the heavy load. You MAY need to manually remove the leaves, especially the first few years.

Don't jump the gun. Wait until the last minute to give the tree as much chance as possible to shed leaves itself, but if snowflakes are starting to fall, take a sharp pair of scissors and snip off the leaf stems 1/4 inch from the branch (not woody growth such as the fruiting spurs). Retain leaves on the branch tips, as this is the growth point for next year. Hopefully, they'll figure it out for themselves after a few years.

Several other possible causes of late greenery--your tree was pruned or fertilized too late (after mid-July). It may also have been planted late, perhaps due to a late shipment from a nursery, or it lingered in a pot. Perhaps we had a particularly cool, wet summer; or the tree is on a rootstock that goes dormant late in the season (St Julien A, and all Gisela rootstocks).

Moose:

In a word: fence. If you don't have one, build one. A 4ft – 5ft fence works pretty good in town (with barking dogs) but 8ft is much better and some folks in the Haines area have erected 10' high barrier fences to protect gardens and fruit trees.

The scientific name for moose, *Alces alces*, translates as “twig eater, twig eater.” A moose will strip the bark off even larger trees and eat the delicious fruiting spurs. Imagine the 7ft fence with 5ft of packed snow on the ground. Bullwinkle steps over a fence, effectively, 2ft high and goes to work on the remaining 10ft of your fruit trees protruding from the snow. It can happen day or night, so you may not even notice the damaged (or missing tree) until several days later. *Heart break city!*

An option worth testing is **Plantskydd**, a spray-on blood meal product that is advertised to repel the deer family *and voles* and we know of several Haines growers that say it does, indeed, repel moose. **Plantskydd** is an emulsion that is applied several times yearly with a handpump sprayer. The use of “Irish Spring” soap has also been suggested. Good luck with that!

Snow Settling:

Your precious young trees are happy with vole protection-tied, and are sleeping under 5ft of snow with spring on the horizon. Unbeknownst to you, danger looms. As snow melts, it solidifies and settles--dragging down branches buried beneath, sometimes sheering them off. Strap on the snow shoes and go on patrol after each heavy snow fall, clearing the limbs out of the snow as best you can, but do so carefully; frozen branches are very brittle.

One planning tip is to assume that those limbs under about 3ft WILL be ripped off, in time. Pruning low limbs when trees are young,

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Mending Cracked Limbs:

If a limb breaks under a load, or due to a bear encounter, but is still attached, you may be able to save it. Within a day or two, before the wood dries out, fit the branch back together so it is flush. There should be as few air pockets or gaps as possible.

Use grafting tape (or anything plastic and stretchy such as a plastic trash bag cut in strips) to wrap the limb like you would wind an ace bandage around an arm--overlapping the tape so no air gets to the wound. Have a helper support the limb as you wrap.



If it's a larger limb you can use a few stainless-steel screws for extra strength and then wrap over them. Once wrapped, tie the branch to a higher limb, or a stake, to take all weight off the break. In the spring it should leaf out and begin growing and healing. If it doesn't leaf out, or the leaves die, prune it off mid-summer. If the mend "takes," leave the tape and the support for at least a year (the screws are permanent, leave them in).

Make sure the break has fully healed before removing anything. Pruning back this branch to limit its loading might be advised and don't let it bear fruit for at least a year. Avoid electrical tape, duct tape or ANY tape with a sticky surface. The glue will bond to the bark and strip it off when you remove it later, effectively ringing and killing the limb.

Gratitude

The Chilkat Valley Orchard Project is grateful to Haines Orchardist, Blythe Carter for contributing her expertise to this article. The CVOP is a program of the Chilkat Valley Historical Society, Inc. More info at: chilkatvalleyhistoricalsociety.org.