



Factsheet #2: Caring for Fruit Trees in Early Spring
updated March 2020

Context

Fruit trees that survive a north of sixty winter still face a challenge in successfully transitioning to spring. They need to be protected against south-west injury or sun scald and the environment must be managed so that trees do not emerge from dormancy too early and newly active tissues are protected against freezing.

Waking Up

Trees that have been left to their own devices for the winter need little help in transitioning to spring save snow removal from lower branches trapped in snow to prevent breakage. Do this on a warm day when the limbs are pliable and before the melt/freeze cycle has condensed the snow. Trees that have been covered with a temporary shelter (see Fact Sheet #1) should be vented, that is, opened to the top, once the risk of -35°C can reasonably be said to have passed. Ensure that any transparent or dark plastic coverings used during a sunless period are removed before the sun's return.

Permanent shelters such as greenhouses and coldframes require more active management to regulate temperature because of the warming that occurs under clear plastic. Once we feel the threat of -35°C is over, we crack the doors on our shelters to prevent early 'waking up' (caused when temperatures rise in the day) while nights can be still be damagingly cold. On years with particularly warm daytime temperatures in the early spring, we hang white sheets over our coldframes as an additional cooling mechanism. Once nighttime temperatures are consistently above 5°C or we observe signs of breaking dormancy (eg: bud swell), we open and close the coldframes on a daily cycle.

While we aim for our outdoor trees to 'wake' in sync with the background vegetation, the goal for sheltered trees is for emergence from dormancy to precede this by about a week. The shelters will provide some frost protection and give the trees a longer growing season this way. Once a tree 'wakes up', its tolerance to cold is much reduced and more care will be required to prevent damage to the newly developing tissues.

Sun Scald

Sun scald or south-west injury can become a serious problem on trees exposed to the sun, either in a coldframe or outside. It occurs when the surface of the bark warms on sunny afternoons when the air is still cold; when the sun dips behind a cloud or sets the sudden drop in temperature freezes the warmed tissues can be killed. If the cambium layer is killed over a large area, serious disfigurement and steady decline can set in. Factors that increase risk are:

- Age: young trees are more sensitive
- Size: branches and trunks under 1 cm generally don't heat up enough to be affected
- Environment: trees under clear plastic are more vulnerable because of extra heating
- Colour: trees with darker bark are more prone to injury



Prevention in all cases is the same: apply a light coloured wash (eg: thinned white latex paint) to those areas broadly facing the late winter afternoon sun. Ideally this is part of winter preparations but can be applied on a warm spring afternoon.

Treatment for damage by sun scald or freezing of newly active tissue involves clearing away damaged tissue. Evidence of cell death can be detected by nicking a twig to remove a small portion of outer bark with a fingernail: this will reveal either a healthy green, tan or reddish cambium, or damaged, often watery, brown tissues. The extent of damage can be determined by nicking the bark progressively lower until healthy looking tissue is found. Damaged bark should be removed as soon as detected, as our observations suggest that the fluid from damaged tissues is toxic to nearby cells and can spread damage to unaffected areas once fluid transport increases as the tree breaks dormancy. Prune off twigs or branches with extensive damage and excise visibly damaged bark from larger branches or the trunk – even if all the damaged bark is not removed, the fluids will drain readily out of the cut and cause less harm.



Winter shelter with the top peeled back in early spring.



Sun scald wounds created when bark heated by the sun freezes suddenly. Common some springs.



Apply a whitewash (eg: thinned latex paint) to the south-west facing surfaces of branches and trunks.



Take-aways

- ✓ Manage the environment of your fruit trees to avoid drastic shifts in temperature
- ✓ Aim for emergence from dormancy in near sync with surrounding vegetation
- ✓ Protect from sun-scald with a light-coloured wash on the bark