

Apple trees **CAN** grow in Wyoming

but you need to know some core facts

An apple a day keeps the doctor away ... at least it can't hurt, right?

I have always loved eating apples. As a kid, my mom would have to stop me before I ate all the apples in the fruit bowl, and still today you can catch me eating an apple just about every day.

Naturally, as a gardener, when I choose plants to grow, I choose plants I will enjoy either for their appearance, for their function in the landscape or garden, or because I will enjoy eating them! Apple trees can be attractive plants in the landscape

and also provide fruit to eat and make cider with. Win, win!

But, can apples grow in Wyoming?

There are a few things to know upfront.

1. It will take three to five years after planting before you start picking apples.
2. There will be years no apples will grow. Freezing temperatures when the trees are blooming can result in a partial or complete loss of fruit that year.
3. You will eventually find fire blight (and probably other disease and

insect pests) in your apple trees. You will have to develop a pest management plan. And,

4. You need to prune trees every year.

Apple Varieties

Apples are among the cold-hardest fruit trees. Of the thousands of apple varieties out there, many will survive Wyoming's cold winters. You can't choose just one. Apples require cross-pollination, so you will need to plant at least two varieties for pollination to occur and for fruits to develop. Crabapples are also good pollinizers for apples.



Some varieties known to thrive in Wyoming include Snowsweet, Zestar, Honeycrisp, Cortland, Haralred, Lodi, McIntosh, and State Fair.

Rootstock

A rootstock is a root system from one variety with another variety grafted on top. Rootstocks are either **dwarf, semi-dwarf, or standard**, meaning the rootstock is controlling the overall size of the tree. Selecting rootstock for your apple trees may be a little confusing and overwhelming. I've found that, while there are many options out there, as a consumer you have limited options beyond "what is available" from the nursery.

Dwarf rootstock will produce trees that grow to 8-10 feet tall, which is ideal if space is limited. Dwarf trees require staking or trellising for support, otherwise they may topple over from the weight of the fruit. Dwarf rootstocks tend to do better in mild climates and may not be good choices for many areas in Wyoming.

Semi-dwarf rootstock will produce trees 15 feet tall and wide. Semi-dwarf trees are often good choices for backyards and commercial production.

Apple trees on **standard rootstock** may grow 25-50 feet tall. The nice thing about smaller trees is that

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pruning and harvesting can be done from the ground and does not require a ladder to reach most of the apples. Standard trees will eventually start producing most of its apples toward the tops of the trees where they are harder to get.

Again, you may not be able to choose the exact rootstock from the nursery, but it is worth asking if any fire blight-resistant root stock is available. Rootstock not only determines the size of the tree, but also the tree's susceptibility to diseases like apple scab and fire blight.

Pruning

Start training apple trees at planting time, and prune annually throughout the life of the tree. Pruning is one of the most important maintenance practices required to get good yields, manage diseases, and to control the size of the trees. Without proper pruning, apples tend to overproduce, meaning they produce a lot of apples, but they are small and lack flavor. Properly pruned trees will have fewer, but larger, apples with higher sugar content and better flavor.

Apples should be trained to a central leader with properly spaced lateral branches off the main trunk (central leader). See bit.ly/wyoapplepruning. If a young tree does not have any lateral branches, top the tree at 3-4 feet tall to encourage branches to emerge below the pruning cut. Once branches have emerged, select 3-5 branches that are 3-4 feet above the ground. These will become the lowest permanent branches on the tree. Wide branch angles are desirable. Leave one upright branch to become the central leader. Remove everything else below these lower branches, including root suckers. These lowest branches are called scaffold branches and should be spaced evenly around the trunk.



As the tree grows, select three to five more branches 2-3 feet above the scaffold branches. These will develop the next scaffold whorl of branches. A mature semi-dwarf apple tree will have three scaffold whorls with the lowest branches being the longest and the upper branches the shortest, giving the tree a pyramidal shape.

Flowering and Fruit Production

Apples flower and produce fruit on spurs (short, lateral branches usually 1-2 inches long). These spurs grow on 2-year-old wood. Keep this in mind when pruning. You do not want to remove too much wood. Make sure to leave plenty of spurs on the tree. Also, be careful when harvesting apples not to accidentally pull the spurs off with the apples.

Apple Diseases and Pests

Fire blight is the most common disease problem with apple trees.

Fire blight infects many apple varieties, infecting flowers, twigs, and fruit. Symptoms often appear when new leaves turn brown, twigs discolor and droop with a classic shepherd's crook, and cankers appear on branches and sometimes the trunk. Pruning to remove infected branches is the best control method. Pruning will not eliminate fire blight but can keep the disease in check and reduce spreading the disease.

Apple scab is a fungal disease often noticed in spring and summer as dark, roughly circular spots on the leaves. The fungus also infects fruit. Fruit will have small, raised brown spots similar in appearance to a scab. The disease affects the quality of the fruit, and infected leaves often drop prematurely, which stunts growth and weakens the tree. Sanitation is the key to reducing apple scab. Rake and destroy leaves in fall to prevent the disease from spreading from year to year.

Codling moth is a common insect pest in apple orchards, especially in dry areas. Codling moths emerge around bloom time and lay eggs on leaves and fruit. When eggs hatch, the larvae begin feeding on the fruit by tunneling into the apples. Small holes with frass around the hole is an indication of codling moth presence in the apple. Insecticides are available for homeowners and commercial growers if codling moth infestations are severe.

Wyoming Apple Hardiness Study

Thanks to a specialty crop grant through the Wyoming Department of Agriculture, I'm conducting an apple variety study, examining winter hardiness in 15 varieties and different rootstocks. The trees were planted last spring.

Results from this study will help develop a list of apple varieties recommended for Wyoming.

The apple varieties in this study include September Wonder Fuji, Ben Davis, Yellow Transparent, Orleans Antique, Enterprise, Arkansas Black, Cortland, Liberty, Freedom, McIntosh, Zestar, Honeycrisp, SnappyMac, Lodi, and Haralred.

We look forward to seeing which varieties are suitable for Wyoming and sharing that information with you.

*Just how many times **Chris Hilgert** has seen a doctor is none of our business, but darn, we sure are curious if the apple strategy works. He is the Master Gardener state coordinator and a member of the Department of Plant Sciences at the University of Wyoming. He can be reached at (307) 766-6870 or at chilgert@uwyo.edu.*

