



featured

Landowners pursue love of apples through

By Jennifer Thompson

A love of apple trees that began during childhood came to fruition in a Laramie-area man who established an orchard on his acreage.

Steve Miller's family in Riverton always grew some of their own food, but time spent at his grandparent's place began his interest in apples.

"My grandparents had a crabapple, and it just always produced crabs, and they were a pretty good size, so we harvested it every year for jelly," he says. "They also had an old, green apple, and I loved the old tree." That very old tree, just outside his grandparents' picture window, produced many apples over the years.

A young Miller left Wyoming to pursue his studies but eventually returned and accepted a position at the University of Wyoming in the botany department. A mycologist (fungus expert) by training, Miller checked out many of the old apple trees growing in the Laramie

area and those across the state.

He and his partner, Terry McClean, eventually purchased 40 acres east of Sheep Mountain in the Laramie area. She works in the botany department as well.

Ten years ago, the couple began the first phase of building their

energy-efficient straw bale house (see story page 14) and began plans for apple trees at this exposed, high-elevation location. Steve and Terry constructed a concrete block wall next to the house to provide protection for the trees from the wicked west wind – a dominant factor of the local climate.

Wall Adds Protection for Trees

Although most of the trees Miller planted on the property were very young, he splurged on the first ones, which were older stock. He purchased several Honeycrisp and assorted varieties of apple trees and planted them on the east side of this wall.

Miller estimates the wall adds an additional month to the growing season. However, as Miller learned that first winter, the wall has other properties, notably that of a windbreak. A 12-foot high drift built up around the trees that unusually snowy winter. In the spring as the snow melted, Miller's winter worries were confirmed as many of the trees sustained damage. He believes the snow shifted in opposite directions as it packed around the trees thus breaking the trees in one direction and then the next.

Most of the trees survived, and he has gradually pruned and nursed them back into shape. A slat snow fence placed upwind of the concrete wall reduces the



The cement wall on the west side of the apple trees adds about one month to the growing season.

landowners

high elevation school of hard knocks

amount of snow that reaches the wall and eliminated large drifts around the trees.

Miller now has about 90 trees and 12-plus varieties (many of them around 5 years old) along with three cultivated varieties of plums. His main challenges other than wind and snow have been critters – namely voles, rabbits, and pocket gophers.

Techniques to Reduce Pest Damage

Methods to prevent animal damage included using pipe or tubing around trunks to protect them from rabbit and vole damage (both can chew off bark and girdle the trees, effectively killing them). He also believes placing a mothball in each of these tubes in the fall helps repel rodents. He has found trapping to be one of the few effective means of controlling the pocket gophers. He wasn't interested in poisons due to his dogs and other wildlife in the area. He uses Victor BlackBox Gopher traps (two placed back-to-back in a tunnel) to catch these rodents, and the local foxes take care of the remains.

Other pest issues include leaf rollers, which are larval caterpillars from certain moths that lay their eggs on the leaves. The caterpillars roll the leaves around themselves for protection, holding the rolled leaves in place with a spider web-like material.

He sprays early in the season after the pollinators have finished their work and moved on.

Fireblight is probably the worst disease he has to deal with. This disease affects plants in the rose family, so one tactic is to avoid raising other rose family plants on the property.



Terry McLean and Steve Miller established an acreage east of Sheep Mountain near Laramie.

He thinks stressed trees are also more susceptible to fireblight.

Many apple varieties are propagated using rootstocks. He

chooses a winter-hardy rootstock (Miller favors a hardy Russian variety called "Antanovka" – which was probably the same variety as the old apple tree in his grandparents' yard). Then, a piece of scion (cutting) wood from the variety of interest is grafted on to the rootstock to form a new tree. This method is useful for saving old apple tree varieties as well as cultivating new ones.

Miller had about a 60- to 70-percent success rate at first – as with most skills, practice makes perfect. As word has spread about his interest in apples, many have invited him to look at their old apple trees and take cuttings for scion wood.



TRY THESE VARIETIES

Suggested varieties for this area based on Miller's experiences:

Honeycrisp	Keepsake
State Fair	Sweet Sixteen
Haralson	Regent
Haralred	Hazen
Prairie Magic	Norland

Old varieties:

Wealthy
 Wolf River
 Yellow Transparent (ripens very early but then turns mealy; good for applesauce)

Grafting Perpetuates Trees

One gentleman asked Miller to take cuttings from one of his trees because his children had grown up loving the tree, but it had developed heart rot. He hopes Miller is able to graft the wood onto rootstocks and create new trees to give to each of his children and allow the tree to live on at their new homes.

Miller believes keys to growing apples in this climate are:

Variety selection – He believes about 10 to 12 tough varieties will work well here (see page 13 for suggested varieties).

Watering – Miller waters his trees (which are in well-drained soil) twice a week during the growing season, but he believes winter is one of the most crucial times for watering. He advises watering trees at least once a month during the winter. He has a frost-free spigot and hand waters, although he plans on installing an automatic drip watering system. Miller is lucky his property is on a gravel bench, which has easily accessible, high-quality water.

Regular maintenance activities include controlling vegetation around the trees. Weed and grass control (especially fall trimming) help reduce competition and also provide a less-favorable habitat for the critters that eat the trees. Miller tried weed barriers, but he thinks the barriers along with cultivating and amending the soil provided a nice habitat for pocket gophers. He ripped up most of the weed barrier.



STRAW BALE HOUSE WITHSTANDS WORST OF WINTER

Miller and his partner have several other passions related to rural living. One is their residence. Miller had been interested in alternative building structures for a long time and, after much research, they decided to build a straw bale house.

The couple began construction 10 years ago (memorably pouring the foundation on 9/11) thinking they would complete it in three years. Life intervened and, without any construction loans, they are now finishing the last of three phases.

The first phase housed all the electricity and water infrastructure. The second was the master bedroom, and the final phase is a great room. The structure will be around 4,700 square feet. The first two phases were about 3,600 square feet, and they heated it for less than \$100 a month using natural gas for a floor radiant heat system.

Hot water solar thermal units, which will further reduce their energy consumption, will be installed when the house is completed.

Although the house is made of straw bales, the ferocious west winds have failed to huff and puff and blow down this sturdy structure. The straw bales are coated with gunnite (a sand and cement mixture), which is shot onto the bales at very high velocity, penetrating and protecting the structure.

The walls have an insulation factor of R52 as compared with a 2 x 4 construction house with an R factor of R19. Stucco will complete the structure, harkening back to Miller's grandparents, who built their own house and finished it with a scratch coat of stucco.

The school of hard knocks can be a harsh teacher, but it can also produce bountiful rewards for those who heed its lessons. The Millers continue to experiment and learn.

Jennifer Thompson is the small acreage outreach coordinator with the University of Wyoming Cooperative Extension Service and the coordinator of Barnyards & Backyards magazine. She can be reached at (307) 745-3698 or jsjones@uwyo.edu.