

High tunnels, or hoop houses, extend Wyoming's growing season and allow gardeners to grow a greater diversity of vegetables.



HIGH TUNNEL SURPRISES

Grow peanuts in Wyoming? Artichokes? You bet, with a little help from a hoop house

By Jeff Edwards

Do you know that, just by providing a single layer of protective cover over a garden, you can increase your USDA plant hardiness zone?

The average annual minimum temperature can be raised about 10 degrees Fahrenheit allowing a greater diversity of crops grown for a longer period of time.

A variety of methods can protect crops. My mother used to haul out the quilts and blankets on those early, frosty fall evenings, for instance. Others, like commercially available films known as floating row covers, can be used and are a bit easier to handle. Floating row covers offer limited protection and let in moisture and light. Securing these can be an issue, and they do have a tendency to “float” away in Wyoming winds.

The next level of protection is a cold frame or “low tunnel” (Figure 1) and can work quite well but managing the temperatures in the summer can be challenging and, if you remove them, where do you store them?

The Wyoming Department of Agriculture and the University of Wyoming Cooperative Extension Service have initiated an educational program showing how to

build high tunnels/hoop houses (click the Calendar link at barnyardsandbackyards.com for dates and locations). Small equipment can easily enter and work inside these structures. They are relatively inexpensive, easy to construct and manage, and can significantly extend the growing season and production. They also can be a therapeutic reprise from the doldrums of the cold and grey of winter. An article describing how to build a hoop house is at barnyardsandbackyards.com, click Archives, then 2010 Issues, then “Here’s how to build a hoop house” under Winter 2010.

Gardeners and producers are finding not only can they grow traditional crops better (peppers, tomatoes, and cucumbers), but they can also grow crops that would otherwise not survive let alone produce in Wyoming’s highly volatile spring and fall conditions.

Here are a few non-traditional crops that will produce in Wyoming under high tunnels.

Artichokes – A native thistle to the Mediterranean area and valued for its edible bud and fleshy leaves, globe artichokes have been traditionally grown as a perennial crop in California because of the state’s mild year-round

growing climate. New varieties make producing artichokes annually in other regions of the country a reality. Rutgers University researchers have demonstrated the potential of this crop for local specialty markets or home garden use.

Celery – Gardeners in Wyoming can grow a range of celery cultivars with sporadic success – success may increase if grown under a protected cover. The stalks grow in tight, straight, parallel bunches and are typically marketed fresh, without roots, and just a little green leaf remaining.

Okra – In the same plant family as hibiscus, this vegetable is prized by many and avoided by others. Young, immature fruits are eaten fresh, cooked, or fried and can be frozen, canned, or dried. Ripe seeds contain 20-percent edible oil, and they can be used as a substitute for coffee. Considered an annual with 50-90 days to first harvest, the harvest period may continue up to 180 days.

Peanuts – An annual with small, yellow flowers. After fertilization, the ovaries are pushed into the ground where the fruit develops (called pegging). Peanuts are the seeds of the plant and can be eaten raw, roasted, or ground as peanut butter. It is high in vitamin B, protein, and minerals. Oil cakes and vines can be fed to livestock. Peanuts may be harvested after 90-150 days depending on the cultivar. Peanuts are sensitive to dry winds and hail at an early



Figure 1. A cold frame (low tunnel).

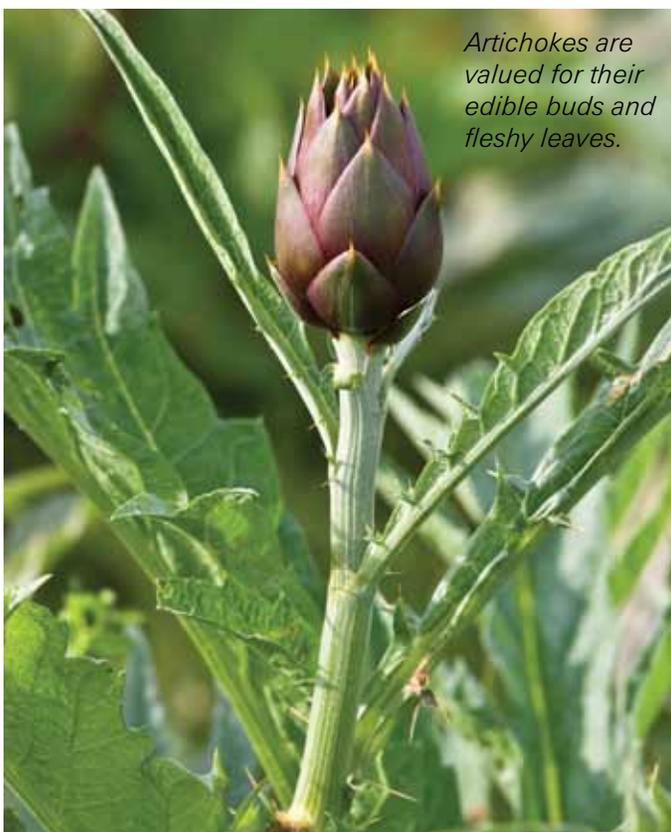
stage. There should preferably be no rain on a crop once pods are mature.

Sweet potatoes – Grown from “slips” taken from a mother plant, they form herbaceous vines and, in Wyoming, are commonly used as a decorative annual (these decorative cultivars are edible – but they may not have the best flavor). Sweet potato varieties form edible tuberous roots that vary largely in shape, color, and texture. They are eaten boiled, baked, candied with syrup, or pureed, and they are processed like Irish potatoes into fried chips, starch, flour, and glucose. They can be canned and dehydrated. The tubers have a high concentration of carbohydrates in the forms of sugar and starch. Dry vines have feed value, which compares favorably with alfalfa hay as forage. The sweet potato is being regarded as a valuable raw material for producing alcohol bio-fuel. Sweet potatoes may be harvested after 80-360 days. A frost-free period of 110-170 days is necessary to reach maturity.

If you find yourself wondering what to do with a high tunnel, take a look at some of the different crops that can be grown and surprise your family.

For more information about some of these crops, see ecocrop.fao.org.

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Artichokes are valued for their edible buds and fleshy leaves.