

Utah's climate is changing, where it is gradually warming. Sudden, extreme weather events are becoming more common as a part of this. This includes more frequent hard frosts in the spring that happen after traditional plantings dates. Last spring, many lost newly planted tomatoes in late May due to hard frost. A further example of this is that the tomatoes that survived the frost then endured two weeks of cooler temperatures with daily rain. This caused the plants to die throughout the summer, and very few people harvested many tomatoes.

Additionally, in the fall of 2020, weather in the fall went from mild to single digits overnight. Walnut trees all over Utah were severely damaged with the upper two thirds of the canopy being killed. The trees still have not recovered.

Last summer, we also had a record number of plus 100-degree temperatures. This caused many vegetables not yield at all, or they had greatly reduced yields.

Even though these weather events are becoming more common, there are things that can be done to minimize damage to garden plants and even fruit trees from them. This involves building inexpensive protective structures and devices, irrigating correctly, and ensuring that vegetable plants and fruit bearing trees receive sufficient nutrition.

Protecting plants from late spring frost does not have to be expensive. Saving washed out milk jugs is an example. The bottoms can be cut off and the modified jug can be placed over young plants to offer a few degrees of protection. Tarps and blankets can also be used as long as they do not smash plants. Low tunnels are another option. They are structures made of flexible pipe, fiber glass poles, etc. bent over into a half hoop shape a few feet tall and wide that support a clear plastic sheeting covering. They are more of an investment, but the frames can be repurposed in the summer and covered with shade cloth (20% – 30% shade) to increase yields of tomatoes and peppers and reduce summer sun scorch on the fruit. Once built these should last for several years.

Maintaining plant health is also part of helping them endure extreme weather events, especially cold weather. This is especially important for fruit and nut bearing trees and shrubs. Plants that are over or under watered are less able to endure and recover from extreme weather events. Once established, shrubs should be irrigated to a depth of 12 – 18 inches every 7 to 10 days. Established fruit trees should be irrigated with the same frequency to a depth of 18 – 24 inches. As temperatures cool in the fall, these still need to be irrigated but on a less frequent basis hopefully until we have regular rain and snow.

It often is not considered, but nutrient deficiencies also are a major cause of plants to being unable to properly harden off in the fall. This also reduces overall plant resiliency and reduces cold hardiness. The easiest way to spot a nutrient deficiency is that leaves will not be dark green. Instead they are often yellow with bright green veins. This is usually a lack of iron in the plant but also can be zinc, manganese or magnesium. The light green or yellow color in the leaves are due to the plant not producing enough chlorophyll. The lack of chlorophyll interferes with the photosynthesis process, causing a lack of optimal carbohydrate production. And so, when an extreme weather event happens, the plant lacks the ability to recover.