Don't let those automatic sprinkler systems that can be seen spraying during rain storms fool you; we've had plenty of water this spring. And, while you may not need to start building an ark, some plants may be damaged by this soggy soil.

Most of the plants in the garden will survive this excess water Mother Nature is supplying, says Jerry Goodspeed, Utah State University Extension horticulturist. A few will struggle and a couple may even die, but most plants can tolerate temporarily saturated soils. It is when they are planted in constantly water-logged soils or where there is a high water table that many struggle and die.

"Believe it or not, constant excess water can be a problem in some sites in Northern Utah," Goodspeed says. "Many areas either have a high water table or a high percentage of clay in the soil. Clay soils hold the moisture and water, and are thus often called *heavy* soils."

Too much water in the root zone damages a plant faster than too little water, he explains. Roots are living, functioning organisms that require oxygen for metabolic activity and survival. Too much water depletes the available oxygen and literally drowns the plants.

Some plants grow better in heavy soils than others, Goodspeed says. They have adapted over time to low oxygen levels. Probably the most well known is the bald cypress (Taxodium distichum). In the South, bald cypress grow in swamps. Here, in Northern Utah, they can be grown in our heavy soils and where the water table is high.

"The bald cypress is an odd tree," Goodspeed says. "It is a conifer, but loses its needles every fall. It is one of a handful of deciduous conifers. There was a gentleman in Salt Lake who planted one in the spring. The needles turned color in the fall and fell off. He dug the tree up, thinking it had died, and brought it into our office to find out what had killed it. Boy, Was he embarrassed!"

Many of our native trees and related species and cultivars also perform well in heavy soils, he says. For instance, the mountain or thin leaf alder (Alnus tenifolia), found in our mountains, is an attractive small tree. A related tree is the European alder (Alnus glutinosa). Taller than the native alder, it reaches a height of 40 feet or more.

The water birch (Betula occidentalis) is another small native tree that thrives in wet soils. It only grows about 20 feet tall, Goodspeed says. There is also the river or red birch (Betula nigra), a much taller tree growing upwards of 40 feet high. It, like the native birch, has some resistance to the bronze birch borer.

There are many native willows found in our wetlands and along stream banks. Most are considered small trees or large shrubs, he adds. The globe and weeping willows (Salix matsudana and babylonica) are the two most common trees planted in our heavy soils. Both have some problems and can quickly outgrow their welcome.
Some trees that can be planted with success in the heavy, water-logged soils include swamp white oak (Quercus bicolor), honeylocust (Gleditsia triacanthos), red maple (Acer rubra), and the green ash (Fraxinus pennsylvanica), Goodspeed says. When planting any tree in wet soil, be certain not to over-water. Do not plant them in a lawn, but in a raised bed of their own or with other trees and shrubs. Water them deeply and only when required. Most of these trees can go a week or two between watering in heavy soils.

For more information, contact your local USU County Extension office.

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