

Following Hurricane Helene for Fruit Trees and Vines

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- Minimize travel on waterlogged soils to reduce the potential for soil compaction and rutting.
- Encourage weed and grass growth to help dry soils.
- Try to drain areas of ponding.
- Inspect plants for damage. Trees and vines may be damaged by standing water and by contact with debris in moving water. Symptoms of excessive water on plants include leaves turning yellow or brown at their edge, wilting or drooping foliage, browning of leaves at their center, and brittle green leaves. These may develop within a few days depending on the type of plant, plant health, time of year, and temperatures. These symptoms may be difficult to identify since they are similar to what may be seen late in the growing season under more normal conditions.
- Try to drain areas where water is ponding as soon as possible.
- Fill in eroded areas and re-establish a cover crop on the field.
- Do not prune damaged plants at this time. Wait until they are fully dormant.
- If trees are leaning due to rain-soft soils and high winds, carefully try to pull them back to their original position and stake them from several directions to reduce further movement in the soil. Some root damage is apt to have occurred when the trees were pushed over and further root damage could occur if care is not taken in straightening them.
- Damaged trees may need to be pruned more aggressively during winter and crop-thinned more heavily next spring to aid in recovery.
- After water around plants recedes, remove debris and excess soils. If mulch has been used, removing it might help the drying process.

Heavy rainfall and flooding can cause nutrient deficiencies due to leaching of nitrogen, potassium, and boron beyond the root zone. Nitrogen, phosphorus, and calcium uptake may be inhibited under saturated conditions. Nitrogen will be lost from the soil due to leaching and denitrification. Depending on soil type, this can occur quickly if soil temperatures are warm. Ground applications of nitrogen to replenish what may have been lost is not recommended at this time of year.

Flooding can leave silt deposits on the soil surface which form a hard crust that will lessen oxygen levels in the soil, impede drying of the soil and increase the rate of denitrification. Light tillage once the soil dries to break the crust may lessen this problem.

Trees and vines are more subject to damage from flooding during the growing season than dormancy. The worst time for flooding is during the spring flush of growth in most fruit crops. Fortunately, we are well past that stage. However, the periods of maximum root growth in these crops occur when top growth is minimal, and fall is one of those times. As

flood waters recede, soils that have good internal and surface water drainage will enable plants to respond better than marginal soils.

Replacing trees or vines that may have been destroyed due to flooding should be delayed until soil testing can be taken and the needed amendments can be applied.