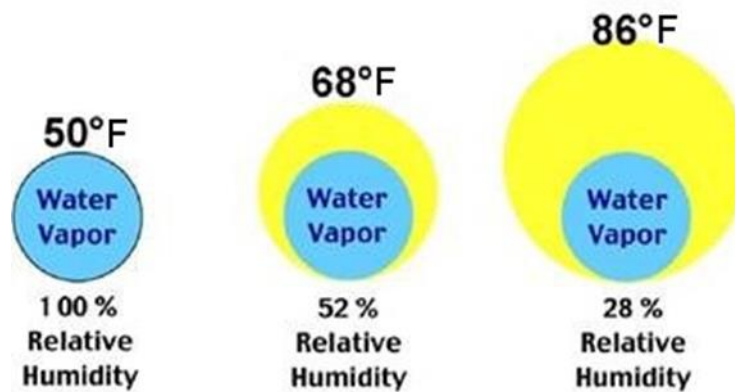


Vapor Pressure Deficit – VPD

- Relative Humidity (%RH) is “relative to temperature.”
- Temperature is like a container:
 - Warm temps are like a large container, they have the energy to hold more water.
 - Cold temperatures are like a smaller container.
- For the same amount of water in the air, as the temperature changes, see how the relative humidity changes with it.



- VPD compares the difference between the water pressure at the leaf and the water pressure in the ambient air. This is a “goldilocks’ principal”: you can be too wet, too dry, or just right.
- When your plants are “**just right**” you are going to have greater growth, pull more nutrients, and increase yield and overall quality. Here is why: The stomata, located primarily on the bottom side of the leaves, open to allow an efficient two way street; they uptake CO₂ and expel water vapor and oxygen.
- When conditions are **too dry**, the release of water vapor (transpiration) can outpace the roots ability to uptake water—resulting in wilting and nutrient burn. Stomata may close to help preserve moisture loss and as a result, also restrict CO₂ uptake.
- On the other side of VPD are conditions that are **too wet** (high %RH) in the ambient air. When that is the case, transpiration stops because water cannot be released from the leaf surface. If the water can’t leave, you directly affect the capillary action pulling nutrients through the plant.