**Supplementary information 1**

Water plays a critical role in the terrestrial hydrological cycle and in maintaining the earth's water and energy balance. The physical, chemical, physical and biological properties of water, such as ionic dissociation, high heat of vaporization, high heat capacity, dielectric constant, surface tension, together with environmental physical phenomena like the atmospheric pressure, vapor pressure and temperature in conjunction with the soil properties impact plant development. Both water and air are in continuous movement between saturated and unsaturated zones along the normally unsaturated soil [1,2]. This tendency to go from wet to dry is a moisture gradient. Thus, a low moisture gradient corresponds to a condition of a dry zone with less water available for the use of plants. This phenomenon has been widely studied given its association with the reduction of the stomatal index that affects the transpiration process, which is one of the main driving mechanisms of the root to absorb water from the soil [1-3]. Moisture can be measured as relative humidity percentage (% RH), being the most common method and it is expressed as a percentage between zero and 100%. The % RH indicates the amount of moisture in the air as a percentage of the maximum amount that can be mixed with the air at a specific temperature and pressure (below 212° F). A reading of 100% RH means that the air is totally saturated with water vapor and cannot hold any more [3-5].

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