Root Zone Available Water Capacity Map of North Carolina

Soil Root Zone Available Water Capacity - (RZAWC)

The Root Zone Available Water Capacity (RZAWC) is the sum of available water capacity (AWC) times thickness for all layers in the root zone. This approximates the volume of water that is held in the root zone and can be used by crop plants. RZAWC effects crop production and is an important physical soil property.

The RZAWC soil is calculated from the surface to the beginning of the first root restrictive soil layer, such as bedrock or a very dense layer, or to a depth of 150 cm. The quantity of water held in the rooting media that is available for plant use directly influences soil productivity. The importance of RZAWC varies somewhat geographically because the capacity to hold water during key parts of the growing season is more critical in some climates than in others. Water in the surface layer is critical to establish plants, but the amount of available water stored throughout the root zone usually determines the most productive soils.