Whether you are new to irrigation, or have been working with it for years, it never hurts to review the basics in order to understand the terminology and technology of soil moisture sensing and irrigation scheduling. To this end, the American Society of Agronomy will begin a four-part webinar series on January 26. To learn more or register, visit [http://agronomy.peachnewmedia.com](http://agronomy.peachnewmedia.com).

The first webinar in the series will review the difference between water content and soil water potential; how and where soil holds water; concepts about field capacity, wilting point, and plant available water; and how soil texture affects water-holding capacity. An inadequate understanding of these concepts can lead to poor irrigation management, low irrigation water application efficiencies, and over-application of water, leading to percolation of water below the root zone and associated nutrient losses to leaching.

There are many misconceptions, and even some false claims, about what soil moisture sensors measure and how to interpret the information they provide. The second webinar will delve into the technology of soil moisture sensors, what they actually measure, and why it is important to understand the differences. Sensors can be divided into three broad categories: those that measure soil water content, those that measure potential energy, and those that measure electrical conductivity of the soil, a property to which water is a chief contributor. The most accurate methods are destructive and labor intensive or are expensive and require safety permits. Some sensors have a limited operating range due to the operating principle, sensor–soil contact, or soil volume involved, and so may be best suited to certain types of soils, crops, and/or irrigation systems. Other sensors are affected strongly by soil physical and chemical properties, making interpretation even more challenging. Ease of installation varies widely among sensor types, and so the irrigation manager should have clear goals in mind when choosing instrumentation to use.

The third webinar will examine irrigation methods, beginning with the water. The plant component of the water balance is transpiration, which can be separated from evaporation in the field. Strategies for triggering irrigation will be discussed, including the use of evapotranspiration estimates and plant-based methods such as sap flow, infrared thermometry (IRT) and temperature thresholds. The speakers will identify how these methods may be used to schedule irrigation in irrigated areas across the nation for annual agronomic and horticultural crops, as well as perennial fruit and nut crops.