Decision support system (DSS) for irrigation management on substrate grown strawberries

The decision support system for irrigation management is a system of precision irrigation for use in substrate grown soft fruit crops. The key features of the system are: 1) Data logger, which is able to trigger irrigation events automatically 2) soil moisture sensors (up to 12) and 3) remote access. A number of moisture sensors (6-12) are inserted into different pots/bags within an irrigation block, readings are logged frequently (e.g. every 5 minutes) and an average volumetric moisture content (VMC) value is calculated. As the plants use the water within the substrate the VMC declines until it eventually reaches the irrigation trigger threshold, upon which an irrigation event is then automatically triggered via the farm irrigation rig. Remote access to the control loggers within each irrigation block gives real time information on coir moisture contents and irrigation timings. The benefits of the system are: water is only given to plants as and when they require it; coir moisture content is maintained within precise limits; close control of amount of run-off; reduces the amount of fertiliser and water required to grow the crop; reduces the risks associated with over or under watering; maximises crop yield and fruit quality; real time information accessible remotely; savings in time and costs compared to manually monitoring and adjusting irrigation programmes.

Extra info