ABSTRACT

AN AEROPONIC PLANTING SYSTEM

The present invention provides an aeroponic planting system, comprising a base tray, at least one planting tower providing a growing area for plants, which is installed on the base tray, a nutrient liquid distribution tank storing nutrient liquid, a mist device that includes a nutrient liquid distribution pump that is in connection with the nutrient liquid distribution tank, and mist nozzles that are in substantial connection with the nutrient liquid distribution pump, which spray nutrient liquid to cover roots of the plants that are within an enclosed space of the planting tower, a first heat and humidity sensor installed within the enclosed space of the planting tower, and a controller that is interfaced with the first heat and humidity sensor and the mist device. The controller provides an automated control of the nutrient liquid distribution pump of the mist device based on the temperature and humidity within the enclosed space of the planting tower as measured by the first heat and humidity sensor. For enabling use of the system in greenhouses such as traditional greenhouses or containerised greenhouses, the system may further comprise a second heat and humidity sensor installed outside of the planting tower that is interfaced with the controller, and one or more pieces of equipment that include ventilation dampers, ventilation fans, and heaters that are interfaced with the controller.

FIG. 1a for publication.