ABSTRACT

A plant factory planting system is composed of a plurality of independent planting units, connecting corridors and equipment; where at least two planting units are grouped together and are communicated by a ventilation fan; the two units within the group are interchanged between day and night, and the temperature difference between day and night is realized by means of a heat pump unit; and connecting corridors are arranged between groups that are not communicated with each other. An operation method and daily cycle management method of a plant factory growing system are further included. The plant factory growing system and operation method can reduce energy consumption, change and shorten the phenological period, and realize annual and efficient production of perennial woody fruits.