Airponics Chamber

Table of Contents

Stakeholder Needs

The Airponics Chamber is guided by a series of stakeholder needs, listed below.

1: Optimum aeroponics growth temperature

In an aeroponics system, the optimum growth chamber temperature should be between 4 and 30 degrees celsius for successful plant growth.[1]

2: Minimum aeroponics light quantity

In an aeroponics system, it is necessary to provide sufficient light quantity of at least 8 to 10 hours per day for healthy plant growth.[2]

3: Usable light spectrum

In an aeroponics system, infra-red light should be filtered out, as to utilize only the portion of the light spectrum needed for plant growth and to reduce heat build up inside of the plant cells.[3]

User Stories

The Airponics Chamber's stakeholder needs are then used to identify a series of user stories which then lead to design decisions captured in data structure and activity definitions.

Data Structures

This section covers each data structure type in the **Airponics Chamber**.

[1] V. Otazú, Manual on Quality Seed Potato Production Using Aeroponics, vol. 44, International Potato Center (CIP), Lima, Peru, 2010. https://doi.org/10.4160/9789290605041

[2] Imran Ali Lakhiar, Gao Jianmin, Tabinda Naz Syed, Farman Ali Chandio, Noman Ali Buttar, Waqar Ahmed Qureshi, "Monitoring and Control Systems in Agriculture Using Intelligent Sensor Techniques: A Review of the Aeroponic System", Journal of Sensors, vol. 2018, Article ID 8672769, 18 pages, 2018. https://doi.org/10.1155/2018/8672769

[3] "Understanding Light Energy for Plant Growth," Aeroponic growing systems For greenhouses and indoors the natural solution for CLEAN Aeroponic food indoors. https://www.aeroponics.com/aero65.htm