Camellia Sinesis Rapid Growth Platform

Tech ID: 32941 / UC Case 2022-565-0

ABSTRACT

Researchers at the University of California Davis have developed a rapid growth platform that aims to decrease crop production time, allow for tunable sensory attributes, and decrease carbon emissions.

FULL DESCRIPTION

Tea is extracted from the plant camellia sinesis, an evergreen woody plant. Currently there is limited domestic tea production due to the intensive labor requirement, the amount of time required to establish steady production, and complex supply chains. It takes approximately two years to propagate camellia sinesis variants and an additional five years to reach a steady state of tea production. To achieve the preferred chemical profile needed for high quality tea, processing needs to occur within 24 hours of harvest. Current tea production methods also yield large carbon emissions.

Researchers at the University of California Davis have developed a rapid growth platform using nutrient solutions that aims to decrease crop production time, allows for tunable sensory attributes, and decreases carbon emissions. This novel platform reduces the time to harvest tea from roughly seven years to five months, while also allowing for the modification of the camellia sinesis to obtain high quality tea leaves with desired traits. This novel technology can be easily adopted by farmers and is especially suited for controlled indoor growth environments. Additionally, this system can decrease CO2 emission through reduction in transport and domestication of work force.

APPLICATIONS

- Cultivating, harvesting, and processing of tea
- Adjustment of tea attributes to meet consumer preferences
- Localizing tea production

FEATURES/BENEFITS

- Reduction in harvest time
- Adjustable attributes of tea to suit consumer preferences and exceed quality standards
- Reduction in carbon emissions and processing energy requirements

PATENT STATUS

Patent Pending

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INVENTORS

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OTHER INFORMATION

KEYWORDS

tea, crop production, harvesting, carbon emissions, Camellia Sinesis, rapid growth

CATEGORIZED AS

- **Agriculture & Animal Science**
  - Other
  - Processing and Packaging
- **Biotechnology**
  - Food
- **Environment**
  - Other
- **Materials & Chemicals**
  - Agricultural
  - Chemicals

- Other

RELATED CASES

2022-565-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Novel method to Efficiently Synthesize complex Carbohydrates
- Method of Preparing Multivalent Single Chain Antibodies (scFv)
- Synthesis of Immunopotent Alpha Glycolipids via Glycosyl Iodides
- High-Throughput Screening of Neuraminidase Inhibitors

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