

國立臺灣大學技術行銷表

臺大案號: 12A-110720

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技術名稱	植物工廠植床植物性狀與生長環境自動監測系統
發明人/單位	林達德/生物產業機電工程學系
技術內容	植物工廠為精緻農業發展之趨勢。本專利提出一針對植物工廠作物設計之植株性狀監測系統，可提供植床全貌影像及環境資訊，並可進一步提供個別植株二維及三維性狀特徵，以建立生長資料庫並作為栽培作業精緻化之依據。
技術成熟度	<input type="checkbox"/> 量產 <input type="checkbox"/> 試量產 <input checked="" type="checkbox"/> 雛型 <input type="checkbox"/> 實驗階段 <input type="checkbox"/> 概念 <input type="checkbox"/> 其他
應用方式及 預期產品說明	1.以本專利核心技術發展植床植株性狀量測系統。 2.以本專利核心技術發展植床環境因子監測系統。 3.將上述系統應用於各式植物工廠。 4.將上述系統應用於精緻/集約農業栽培環境。
技術創新度/優點	目前已發表的相關技術中，並無可適用於各式規格植床之量測平台，且無可提供環境參數與植株性狀特徵之軟硬體技術。而本專利技術具有極高創新度，除可克服目前植物工廠作物及環境監測的問題，更有利於新一代植物工廠與栽培流程研發設計。
智慧財產權	專利申請中

Marketing Abstract of NTU's Invention Disclosure

NTU's docket no: 12A-110720

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Title	Plant Features and Growth Environment Monitoring System for Planting Beds in Plant Factories
Inventor (s)	Ta-Te Lin / Department of Bio-Industrial Mechatronics Engineering
Brief Description	One of the sophisticated agricultural trends is plant factory development. This invention proposes a plant traits monitoring system aimed at crops in plant factory, which provides the whole picture of planting beds and the environmental information. Through this system, we can further establish a plant growth database to refine the cultivation operations from the provided 2-D and 3-D characters of individual plants.
Development Stage	<input type="checkbox"/> Production <input type="checkbox"/> Trial production <input checked="" type="checkbox"/> Prototype <input type="checkbox"/> Lab scale <input type="checkbox"/> Idea <input type="checkbox"/> Others:
Fields of Application	<ol style="list-style-type: none"> 1. To implement a plant traits monitoring system by the patent technology. 2. To implement an environmental factors monitoring system by the patent technology. 3. To apply the system above to various plant factories. 4. To apply the system above to sophisticated and/or intensive agricultural cultivation environment.
Advantages	Neither the measuring platform applicable to planting beds with various specifications nor the hardware and software technologies for estimating the environmental factors and plant characters have been presented. As the above reason, this patent technology is highly innovative, and it can overcome the problems of plant and environment monitoring in plant factories. This technology can further benefit the development procedures of the new generation plant factory.
IP Right(s)	Patent Pending