桃園市智慧植栽照護管理系統導入校園

張瓊霙

桃園市政府農業局 科長

摘要

桃園市政府致力推動智慧科技導入農業生產，改變傳統生產面貌，以整體提升生產效率及永續性，運用技術包含物聯網（IoT）、環境控制系統、自動生產控制及大數據 AI 分析等，桃園市以校園及青農農場作為示範場域，推動智農導入應用，其不僅能體現食農教育內涵，更能藉由智慧農業技術導入應用，讓學生更能了解創新科技思維，讓科技農作課程從小扎根。除了校園及場域導入應用外，農業局也利用智慧遙測技術建立農作物現況調查智慧資料庫，確認實際種植面積與估計產量，有助於農作物管理相關業務進行，掌握農地利用現況，提高資訊時效性與精確性，為未來農業發展提供基礎數據，制定精準施政方向。智慧農業在校園和場域中的應用，為教育和農業生產帶來了革命性的變革。通過引入先進的技術和管理手段，不僅提升了教學質量和學生的實踐能力，也促進了農業生產的高效和可持續發展。然而，為了充分發揮智慧農業的潛力，還需要克服技術成本和普及率等挑戰，並不斷推動技術創新和應用。

關鍵字：智慧農業、智慧灌溉、智慧遙測

Introduction of the Applications of Agriculture Technologies at Schools in Taoyuan

Chiung-Ying Chang
Section Chief, Department of Agriculture, Taoyuan

Abstract

The Taoyuan Government is dedicated to integrating smart technology into agricultural production to transform traditional practices, aiming to enhance overall production efficiency and sustainability. Technologies employed include the Internet of Things (IoT), environmental control systems, automated production controls, and big data AI analysis. Taoyuan uses schools and young farmers' fields as demonstration sites for smart agriculture applications. This not only embodies the essence of food and agricultural education but also allows students to better understand innovative technological thinking, fostering a foundation in tech-driven agriculture from an early age.In addition to campus and field applications, the Department of Agriculture has established a smart database for crop status surveys using remote sensing technology. This database helps confirm actual planting areas and estimated yields, aiding in crop management and improving information timeliness and accuracy. It provides fundamental data for future agricultural development and helps formulate precise policy directions.The application of smart agriculture in schools and fields has brought revolutionary changes to both education and agricultural production. By introducing advanced technologies and management methods, it has enhanced teaching quality and students' practical skills while promoting efficient and sustainable agricultural development. However, to fully realize the potential of smart agriculture, challenges such as technology costs and widespread adoption must be addressed, alongside continuous technological innovation and application.

Keywords: Smart Agriculture, Smart Irrigation, Smart Remote Sensing