

教育目標

園藝學系為應用科學系，其領域範圍與產業、人類生命及生活關係極為密切。本系之教學目標為：1. 培育具備現代科技理論與實務之現代化、科技化、國際觀的園藝人材。2. 以果樹、蔬菜、花卉為園藝作物之三大主幹，配合育種改良、生物技術、園產品處理技術、現代栽培技術及電腦自動化生產等課程，培訓學生之專業技能。3. 配合現代社會生活水準需求之提升，加強造園在環境綠化、美化之設計與應用的功能。

課程規劃

本系設有大學部與碩、博士班。本系的課程涵蓋範圍非常廣泛，包含蔬菜、果樹、花卉等作物之栽培管理的理論與實際生產，及園產品處理與景觀造園設計。學生可依照個人興趣及專長選擇適當課程，作為日後事業之發展方向。研究生們可進一步研習專門科學，如園藝作物栽培管理、育種學、遺傳學、植物營養學、生理學、生物科技、處理加工學、造園設計等學科，以因應各種需要。

主要研究領域

本系的研究範圍非常廣泛，涵蓋園藝作物之遺傳、生理、栽培、環境、營養、生物技術、保鮮、貯運及環境綠化、庭園佈置、休憩場所之規劃及設計、園藝治療等。其領域如下：

- ◆**果樹**：微體繁殖、保鮮貯藏、產期調節、果樹養分的吸收與利用、果園經營、及改進果樹之生產技術等研究。
- ◆**蔬菜**：蔬菜種子生理、種苗生產及繁殖技術、設施無土栽培、栽培生理及技術開發等之研究。
- ◆**花卉**：改進花卉種苗生產技術、調節花卉產期、增進花卉品質、花卉育種及切花採收後處理及儲藏等研究。
- ◆**生物技術**：作物抗病蟲害、耐逆境、花色及花期等基因之轉移、開發基因轉殖葉綠體作為生物反應器等之研究。
- ◆**園產品處理**：園藝作物採收後保鮮處理技術之研究、採後損耗劣變原因與分子機制之探討與保鮮技術應用於外銷之研發。
- ◆**造園景觀**：造園景觀規劃與評估及景觀生態資源管理與利用、綠地環境植栽設計、綠化技術及樹木醫學等主要的研究主題。



▲木瓜握枝栽培
Bending Shoots Cultivation of Papaya



▲葡萄健康種苗開發
Development of Healthy Seedling of Grape



▲'興亞五號彩色甜椒'
'Hsing AVRDC No. 5' color pepper



▲'中興4號—光輝'長壽花
'NHCU No.4- Splendor' Kalanchoe

教研成果

本系教師治學嚴謹，在國內外園藝作物的學術與研究領域都有傑出的成就，例如：蜜紅葡萄的培育、熱帶果樹健康種苗的生產、果樹無病毒苗之培育技術、蔬菜的介質栽培與穴盤育苗、花卉栽培與新品系育成、果實、切花、蔬菜之採後處理、及藝苔屬蔬菜抗病蟲害及耐環境逆境之基因轉殖的研發等，均有卓越的成果，對台灣園藝產業有實質的貢獻。

本系教師主動協助與輔導農民解決作物的生產，並積極參與社區、學校、農推及農政單位或農民組織等園藝技藝之教育與推廣，協助地方政府規劃、評審、調查有關綠化、美化、環保與生活環境提昇有關之工作。

定期與學生前往東南亞國家，參與姐妹校學生、國外技術人員及農民之技術交流、指導工作交流與園藝資訊之蒐集，深獲好評，也建立深厚國際友誼並拓展國民外交。

本系教師與國內外各公私立機構合作研究計畫平均每年40餘件計畫金額約4千萬元。近七年研究成果技術授權34件、品種權23件、國內外發明專利7件，國內重要學術期刊、研討會、專書章節等550餘篇。



▲'巴陵紫雲'石竹
'NHCU No.1- palinensis'
Dianthus hybrid



▲園藝學系60周年系慶成果展示
60th Anniversary Exhibition of Research Achievements of Horticultural Depment

Mission

Horticulture includes a broad spectrum of sciences, and involves the production and handling of horticultural crops, as well as interior and exterior landscape designs. Its goals are as follows: (1) In line with modern agricultural development as well as societal needs, we educate future horticulturists with global views, modern concepts, advanced technologies, and the ability to apply theories into practice; (2) Fruit, vegetable, and flower crops are used as basic materials for developing modern breeding, biotechnology, postharvest handling, and computer automation techniques. Students will hopefully develop specialized skills that will help them manage problems that may arise in the future; and (3) Beautification of the environment and its related applications are emphasized to meet the high living standards of modern society.

Curriculum

Taught courses are extensively wide in variety, and include managing theory and practice in fruit trees, vegetables, and floral and ornamental crops. Postharvest handling, horticultural product processing, and landscaping also play a major role in the curriculum. By weighing the interest and specialty of students, they can appropriately select courses to develop their future career needs. Graduate students can gain further expertise in a specific science for all-purpose needs; that is, the production and management of horticultural crops; plant breeding, nutrition, and physiology; genetics; biotechnology; and postharvest and processing science, and landscape design and management.

Core Research Topics

- ◆ **Pomology** : Studies on the production of healthy fruit trees, plant tissue analysis, controlled atmosphere storage of tropical fruits, offseason production of fruits, mineral absorption by fruit trees, horticultural management, and improving the production of fruit crops.
- ◆ **Olericulture** : The vegetable programs feature the influence of environmental factors on the production of vegetables, seed quality and viability, plug seedling production system, delicate horticulture, and the development of growing materials.
- ◆ **Floriculture** : Studies on breeding, improvements in flower seedling production and cut flower quality, and the regulation of the flowering period.
- ◆ **Biotechnology** : Studies on the development of biotic and abiotic stress resistance and novel

crops through transgenic approaches, and the development of transgenic plants as bioreactors.

- ◆ **Postharvest Handling** : Studies focused on the development of postharvest handling technology for horticultural products, including transportation, quarantine treatment, and the establishment of the postharvest handling system.
- ◆ **Landscape Architecture** : Studies emphasizing the evaluation of landscapes and their applications, testing of planting design principles, computer simulation, landscape ecology, the development and management of natural resources, tree protection, and the green space system as well as the benefits of landscapes.

Achievements

Department faculty members have attained distinguished achievements in their respective fields of study. The cultivation of “honey red” grape was successful. The production of healthy seedlings of tropical fruits, improved technique for virus-free seedlings, growth medium culture of vegetable crops and plug seedling production system, development of a new flower cultivar and improvements in culture techniques, postharvest handling of fruits, cut flowers, and vegetables, as well as the development of insect- and stress-resistant cruciferous plants are relevant examples. The department can proudly declare that each member has achieved excellence and has made outstanding contribution to the horticultural industry in Taiwan.

In addition to teaching and guiding students in research, the faculties have helped growers solve the problems of crop production while actively participating in horticulture-related activities of local communities, professional schools, farmers’ associations, and different levels of governmental organizations for promoting the education and extension of modern horticultural techniques. In addition, the faculties have assisted local governments in planning, evaluating, and investigating the ongoing programs of environmental protection and beautification to improve the living quality of the public.

Graduated students are encouraged to leave Taiwan to engage in technical exchanges, workshops, and the collection of horticulture information with their counterparts in a sister university overseas or work with agricultural technical personnel and growers in a Southeast Asian country. These programs are well received by the respective school authorities; thus, friendship and basic diplomatic relations are established.