

蘭陽分場 Lanyang Branch Station

蘭陽分場近年來以園藝作物之改良為重點。蔬菜方面，分別育成番茄花蓮亞蔬五號及青蔥蘭陽一號等品種。同時亦加強研發蔬菜之穴盤栽培，其中以小白菜等短期葉菜類較適合穴盤種植。青蔥採收後處理方面，以清晨採收、灌溉水清洗、壓差式預冷、包裝紙箱加臘和冷藏車運送等方式可保持最佳品質。蔬菜有機栽培技術改進方面，以選定地勢較高，採用網室栽培，配合不同科別葉用蔬菜輪作方式等為目前宜蘭地區最佳之蔬菜有機生產方法。花卉改良方面，致力於新興外銷作物銀柳之系列生產技術改進，結果顯示以每公頃施用 $N-P_2O_5-K_2O=250-200-160$ 公斤者芽苞數較多，且脫落率較低。在開發新興花卉寒梅之生產技術方面，以49%氰胺（稀釋100~200倍）或氰氮化鈣（稀釋10倍）處理，可調節寒梅之花期并使花期集中，提昇開花品質。此外，對台灣原生植物之收集，如金花石蒜之復育，亦有良好成效。另外，紅果牡丹、普拉特草、越橘葉蔓榕等具觀賞價值的原生植物，目前正進行馴化工作。果樹方面，宜蘭名產金柑，利用1200ppm乙烯處理可有效改善金柑果色。平地水蜜桃栽培等新技術之開發，亦獲顯著成效。輔導三星地區嫁接梨產業建立上將梨優良品牌，口碑頗佳。植物保護方面，以發展非農藥防治技術為工作目標。除積極研究青蔥甜菜夜蛾綜合防治技術外，並利用阻隔網方式進行防治，生產成本每公頃可降低約180,000元，效益顯著。土壤肥料方面，以改進作物合理化肥培管理方法，減少問題土壤之發生為工作目標，研究結果得知：每公頃施用8公噸發酵豬糞可有效降低青蔥連作障礙，文旦每公頃施用苦土石灰1.5公噸混合鎂鈣富有機肥3公噸，可改善文旦缺鎂現象。高冷地蔬菜栽培施用有機質肥料及酸性土壤施用消石灰，均可提高產量及減輕甘藍與結球白菜根瘤病之發生。結球白菜每公頃施用銨態氮200公斤，不但可確保產量及收益，且葉片中硝酸態氮含量較低，可確保食用安全。



蘭陽分場 *Lanyang Branch Station*

As Lanyang Plain is near Taipei City, the research has been focused on horticultural crops such as summer vegetables, flower crops, and ornamentals. In vegetable breeding, heat tolerant 'Lang Yang No.1' green onion and 'Hualien-AVRDC No.5' tomato were released in 1994 and 1990, respectively. The results of studying on plug cultivation of vegetables exhibited that the short-term vegetables were more adapted to plug cultivation. Green onion harvested in the early morning, washed with irrigation water, precooled by gradient pressure method, packed in the waxy paper boxes, and shipped by refrigerated cars, can keep the best quality. In organic farming of vegetables, the choice of good land, grow them in nethouse, and rotation of vegetables of different families are the best production practices. The application of $N-P_2O_5-K_2O = 250-200-160$ kilogram per hectare to cat willow increased the number of buds and also lowered the shattering ratio of bud. Applying 49% cyanamide (dilute 100-200 X) or calcium cyanamide (dilute 10 X) to 'Flowering Quince' can synchronize the flowering stage and promote the flower quality. The collection and re-cultivation of the Taiwan native plant *Lycoris autrea* have been quite satisfactory. The wild native ornamental plants have been acclimated in Lanyang area, such as *Dissochaeteae pachycentria*, *Pratia nummularia*, and *Ficus vaccinioides*. When kumquat was treated with 1,200ppm ethylene, (once every 35-60 seconds at 26-27°C for 70 hours), the fruit color became uniform and the luster enhanced. Newly developed techniques for growing lowland sweet peach have been released to farmers. The top-grafted scion of pear has gained a good reputation as 'Shangchiang li' pear in Sanhsing area. In plant protection, the research emphasizes on the alternatives other than the use of pesticides. The use of entomopathgenic fungi and sex pheromone to control beet armyworms in green onion has been developed. The beet armyworms in green onion fields can also be well controlled by screening nets. All these methods



蘭陽分場 *Lanyang Branch Station*

can reduce the production cost per hectare by 180,000 NT dollars.

The aim of the research on soil and fertilizer is to promote rational fertilization and to minimize the incidence of problem soil. Citrus and flowers are the major target crops in this project. The problems induced by continuous cropping in onion fields and magnesium deficiency in Citrus grandis have been resolved. Applying organic fertilizer and lime to acid soil in the highland vegetable production area improved the yield and reduced the clubroot disease in cabbage and Chinese cabbage. The application of 200-kilogram ammonia nitrogen per hectare in Chinese cabbage can have a good yield and a good profit. It also ensures eating security because the nitrate nitrogen content will be lower than usual.

► ▼ 青蔥「蘭陽一號」

Green onion Lanyang 1



蘭陽分場 *Lanyang Branch Station*



◀設施內有機栽培之小白菜生育情形
The organic farming of Pak-choi in a green house.

▶用阻隔網防治青蔥甜菜夜蛾效果良好
The beet armyworms in green onion fields have been well controlled by screening nets.



◀銀柳芽條變異“大粒種”
Shoot mutation of cat willow 'Big bud cultivar'

蘭陽分場 *Lanyang Branch Station*



▼高品質之低需冷性甜蜜桃
High quality sweet
peach of low chilling
requirement



▼宜蘭縣三星鄉上將梨結實纍纍，甜
度高，品質風味佳，具商品價值。
The 'Shangchiang' pears
were loaded with fruits in
Sanhsing village.

▲以春雷 (49% Cyanamide) 調節
寒梅花期
Applying 49% cyanamide
can synchronize the
flowering stage of
'Flowering Quince'



蘭陽分場



▲越橘葉蔓榕
*Ficus
vaccinioides*



▲紅果野牡丹 *Pachycentria formosana*



▲金花石蒜 *Lycoris aurea*

▼普拉特草 *Pratia nummularia*



台灣原生植物收集與馴化
*Germplasm collection and Acclimation
of Taiwan native plant.*