

## 毛豆品種改良

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**摘要：**本試驗的目的是利用人工雜交育種的方式，選育高合格莢產量、種莢飽滿、大莢、品質佳，適合鮮食或冷凍加工用的毛豆品種，以供應雲嘉南地區的機械栽培。於本年度利用具種莢大、莢色鮮綠、早熟、風味佳等優良品質特性的綠光75和日本引進毛豆品種，與由產量試驗中選出的高產品系雜交，欲達到毛豆優良品種的選育。進行12個雜交組合，共計得276粒雜交種子。歷年來雜交組合的F<sub>2</sub>~F<sub>5</sub>世代，皆以單粒後裔法為主，譜系法為輔的方式於春、秋二季間進代。88年秋作與89年春作分別選得1668及1860個優良單株。88年秋作的株行試驗，選獲GC94015-5-2-1-1等22個優良品系。第一年品系產量比較試驗：88年秋作，GC94015-1-2-1的合格莢產量顯著地高於對照品種，百粒重、莢大小、蛋白質及糖份含量皆比對照佳。綜合春、秋二季的結果，七個合格莢產量較高的品系中，GC95007-1-1-1-1的合格莢產量、蛋白質含量、糖份含量、百粒重、莢色表現佳，而GC94015-1-2-1的含糖比例較高，在春作時更達14.05%。89年春作：GC95003-4及GC95006-24二品系的合格莢產量高於對照品種，未達差異顯著水準，二者的剝實率、百粒重、合格莢收穫指數與蛋白質含量表現皆佳。GC94015-5-2-1-1及GC95010-7-1-1-1二品系的莢色、硬度、蛋白質及糖份含量皆比高雄選一號佳，為參試品系中品質最佳的二品系。GC95010-18-2-1-2及GC95010-5二品系具高百粒重、低500公克合格莢數、高收穫指數、比高雄選一號佳的含糖量及硬度(未達差異顯著水準)。89年夏作：九個品系具有高於綠光75的合格莢產量，達差異顯著水準。其中的GC95002-1，GC95004-4-3-1-1及GC95010-5三品系的百粒重、莢長或莢寬顯著地高於高雄選一號。GC94015-3，...等五品系的百粒重高於綠光75，500公克合格莢數低於高雄選一號，皆達差異顯著水準。

**關鍵詞：**毛豆、育種、產量、品質。

## Varietal Improvement of Vegetable Soybean

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**Abstract:** The breeding objective is to develop vegetable soybean cultivars with high graded pod yield and good quality, suitable for export as fresh or frozen vegetable soybean. The cultivars should be appropriate for mechanical planting and harvesting in Yun-Chia-Nan area.

To incorporate large seed size, dark green color, early maturity, good flavor and sweet taste from Japanese cultivars to locally adapted breeding lines with good pod yield, 276 F<sub>1</sub> seeds were obtained from twelve crosses.

F<sub>2</sub> to F<sub>5</sub> inbred generations were advanced by pedigree and SSD methods. Pedigree lines selected from 1998 autumn seasons were evaluated in a plant-to-row trial. Twenty-two elite lines were selected.

Combined results of spring and summer trials of PYT in 1999 : GC95007-1-1-1-1 had high graded pod yield, protein, sugar content, big seed and good pod color; GC94015-1-2-1 had highest sugar content among entries, with 14.05% sugar in spring season.

GC95003-4 and GC95006-24 had high graded pod yield, 100 seed weight, high harvest index of graded pod yield, and protein content, in PYT spring, 2000. GC94015-5-2-1 and GC95010-7-1-1-1 had best quality among entries, including better pod color, hardness, protein and sugar contents. GC95010-18-2-1-2 and GC95010-5 had big seed, high harvest index, sugar content and better hardness.

In PYT, nine entries had significantly higher graded pod yield than Ryokkoh 75 in summer 2000. Among them, GC95002-1, GC95004-4-3-1-1 and GC95010-5 had significantly bigger seed and pod size than KS#1; And GC94015-3, had higher 100 fresh seed weight and fewer pod no for 500 gram graded pod than Ryokkoh 75.

**Key word:** Vegetable soybean, Breeding, Yield, Quality