

# 洋香瓜新品種台南九號之育成<sup>1</sup>

黃賢良<sup>2</sup>

## 摘 要

黃賢良·1992·洋香瓜新品種台南九號之育成。台南區農業改良場研究彙報 29：41～55。

洋香瓜 (*Cucumis melo* L.) 台南九號為本場新育成一代雜交品種，其母本 HG5-1-4-6-1-1 係在1989年春由 Honey Dew 與本場選育自交系 G41115 雜交後代選育，父本 TW3-2-6-4-1 在1988年秋由本場自交系 TN151-1 與引進品種 WMR29 雜交後代選育。台南九號父母本 HG5-1-4-6-1-1 與 TW3-2-6-4-1 在 1989 年秋交配，其代號為台南試交 78-13 號。台南試交 78-13 號歷經 1990 年至 1992 年的組合力檢定、品系比較試驗、區域試驗、地方試作、白粉病抗病性檢定及貯藏試驗後於 1992 年 12 月 17 日經農林廳召集之作物新品種命名審查小組審查通過，命名為台南九號。台南九號為俱網紋綠肉系品種，果實高球型，網紋細密，外表乳黃，著果穩定，且在較高溫生長下果實品質表現良好，有早熟，高糖度，抗白粉病等特性。

**關鍵詞：**洋香瓜，台南九號。

接受日期：1992 年 12 月 31 日。

## 前 言

本省洋香瓜 (*Cucumis melo* L.) 之栽培在本場於 1985 年推出隧道式栽培<sup>(1)</sup>以來，面積急驟增加，已成為本轄區之重要經濟作物，為應付市場需求，使品種能多樣化及提高洋香瓜品質，控制隧道式洋香瓜栽培白粉病之發生，本場於 1985 年自美國引進抗白粉病品種 Cinco<sup>(9)</sup>，WMR29<sup>(6)</sup>，AR Hale's Best Jumbo，AR5，AR Topmark<sup>(8)</sup>，等進行品種改良工作<sup>(2,3,4,5)</sup>，期育成市場上少見俱網紋之綠肉品種，及俱早熟性，品質優美，糖度高，果型端正，網紋細密，著果穩定，抗白粉病等特性，以推廣瓜農種植。頃於本品種甫通過命名之際，整理育成經過及品種特性於後，供有興趣學者專家參考。

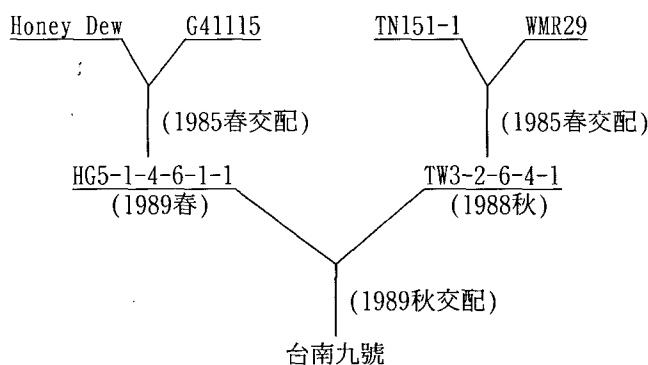
## 親本之育成

台南九號原品系代號為台南試交 78-13 號，為一代雜交品種，其母本 HG5-1-4-6-1-1 係由

1.台南區農業改良場研究彙報第 210 號。本研究承行政院農業委員會經費補助，謹誌謝忱。

2.台南區農業改良場副研究員兼作物改良課課長。

Honey Dew×G41115 (台南場選育自交系) 後代利用譜系法選育之自交系；父本 TW3-2-6-4-1 爲由 TN151-1 (台南場選育自交系) ×WMR29 後代選育之自交系。



洋香瓜台南九號育成系譜

台南九號親本之特性：母本 (HG5-1-4-6-1-1) 生長勢中等、早熟、果實圓球型、果皮乳白色、細網、糖分高、安定、不抗白粉病；父本 (TW3-2-6-4-1) 生長勢強、果實高球型、果皮黃色、網紋細密、穩定、雌花及雄花多、果肉厚、抗白粉病。

Table 1. Horticultural characters of the parents of muskmelon variety Tainan 9.

| Parents           | Growth vigor | Fruit setting | Flowering to maturity (days) | Fruit shape | Skin color | Net   | Flesh color |
|-------------------|--------------|---------------|------------------------------|-------------|------------|-------|-------------|
| ♀ (HG5-1-4-6-1-1) | fair         | good          | 33-40                        | round       | milk white | light | lime green  |
| ♂ (TW3-2-6-4-1)   | strong       | good          | 36-40                        | oval-round  | yellow     | fine  | green       |

| Parents           | Flesh thickness (cm) | Placenta color | Placenta size | Texture | S.S.C (brix) | Fruit weight (kg) | Storage | P.M.R.* |
|-------------------|----------------------|----------------|---------------|---------|--------------|-------------------|---------|---------|
| ♀ (HG5-1-4-6-1-1) | 3.0                  | milk white     | middle        | fine    | 13-16        | 1.0-1.5           | fair    | S       |
| ♂ (TW3-2-6-4-1)   | 3.2                  | milk white     | middle        | fine    | 11-13        | 1.2-1.6           | fair    | HR      |

\*See appendix 1.

## 育成經過

台南九號之育成自 1984 年開始引種，歷經自交系之選育，雜交組合之完成，組合力檢定，品系比較試驗，區域試驗，白粉病檢定及地方試作至 1992 年提出資料審查，前後共九年時間，

其育成流程圖如下：

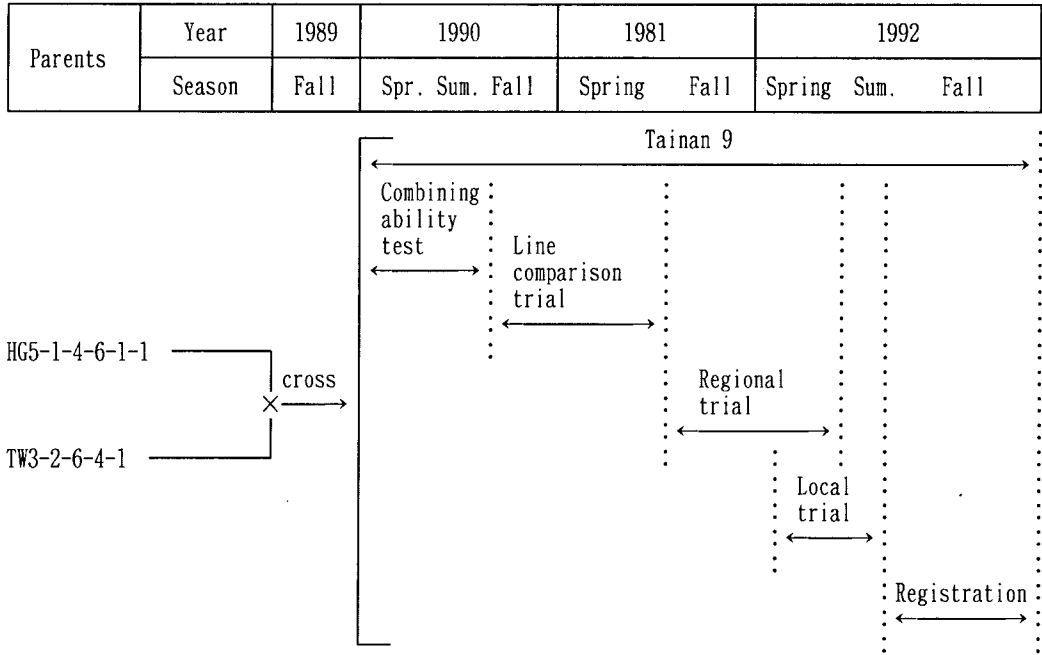


Fig 1. Breeding procedure of muskmelon variety Tainan 9.

一、引種：

1984 年自美國引進抗白粉病品種（自交系）Cinco, WMR29（兼抗白粉病 Race 2 及 WMV-1），AR Hale's Best Tumbo, AR5, AR Topmark（兼抗白粉病 Race 1、2 及蚜蟲）等進行觀察評估，並利用為本育種工作之材料。

二、自交系（親本）之育成：

1985 年春由美國引進之高糖度綠肉系 Honey Dew 品種與本場選育之自交系 G41115 雜交，以譜系法選拔，於 1989 年春選出 HG5-1-4-6-1-1 品系，利用為台南九號之母本；並於同年（1985 年春）以本場選育之自交系 TN151-1 與自美國引進抗白粉病 Race 2 及 WMV-1 之 WMR29 雜交，於 1988 年秋選出 TW3-2-6-4-1 品系，利用為台南九號之父本。（其系譜及親本特性請見親本之育成）。

三、組合力檢定：

於台南本場進行，供試品系台南九號等 36 個單交組合，以台南八號及秋香二品種為對照。網室土耕直立栽培，株距 50cm，每組合種植 10 株，順序排列，二重複。試驗結果台南九號為綠肉系品系，早熟，糖分最高，果型端正，網紋細密，且抗白粉病，表現最突出；試交 78-8 及試交 78-9 為紅肉系品系，較台南九號晚三天成熟，果型品質及抗白粉病表現也不差，但糖分含量略低於台南九號；試交 78-3 為白肉系品系，成熟期與試交 78-8、78-9 相同，果型高球，網紋細密為其特徵，糖分含量亦略低於台南九號，供試 36 組合中共選出台南九號（原試交 78-13 號）等 12 組合晉級品系比較試驗。

Table 2. Characters of combining ability test.

| Hybrids  | Growth vigor | Fruit setting | Flowering to maturity (days) | Fruit shape | Skin color  | Net    | Flesh color |
|----------|--------------|---------------|------------------------------|-------------|-------------|--------|-------------|
| TN.9     | strong       | good          | 33                           | oval-round  | milk yellow | fine   | light green |
| 78-1     | strong       | good          | 43                           | oval-round  | green       | coarse | green       |
| 78-3     | strong       | good          | 35                           | oval-round  | yellow      | fine   | white       |
| 78-7     | strong       | good          | 38                           | oval        | lime green  | light  | orange      |
| 78-8     | strong       | good          | 36                           | oval-round  | yellow      | coarse | salmon      |
| 78-9     | strong       | good          | 36                           | round       | yellow      | coarse | salmon      |
| 78-10    | strong       | good          | 36                           | oval-round  | yellow      | coarse | orange      |
| .        | .            | .             | .                            | .           | .           | .      | .           |
| C.T.(CK) | strong       | good          | 36                           | round       | yellow      | coarse | salmon      |
| TN.8(CK) | strong       | good          | 34                           | round       | yellow      | coarse | orange      |

| Hybrids  | Flesh thickness (cm) | Placenta color | Placenta size | Texture | S.S.C (brix) | Fruit weight (kg) | Storage | P.M.R.* |
|----------|----------------------|----------------|---------------|---------|--------------|-------------------|---------|---------|
| TN.9     | 3.0                  | milk white     | middle        | fine    | 14.0         | 1.5               | fair    | R       |
| 78-1     | 3.0                  | milk white     | middle        | fine    | 11.0         | 2.5               | fair    | R       |
| 78-3     | 3.0                  | white          | middle        | fine    | 11.5         | 1.5               | fair    | R       |
| 78-7     | 3.0                  | orange         | middle        | crisp   | 12.3         | 1.8               | good    | MR      |
| 78-8     | 3.0                  | orange         | middle        | fine    | 11.2         | 1.3               | fair    | R       |
| 78-9     | 3.0                  | orange         | middle        | fine    | 11.3         | 1.2               | fair    | R       |
| 78-10    | 3.0                  | orange         | middle        | fine    | 11.5         | 1.7               | fair    | R       |
| .        | .                    | .              | .             | .       | .            | .                 | .       | .       |
| C.T.(CK) | 3.0                  | orange         | middle        | fine    | 11.0         | 1.2               | fair    | R       |
| TN.8(CK) | 3.0                  | light orange   | middle        | fine    | 11.0         | 1.3               | fair    | R       |

1. \*See appendix 1.

2. Sown: Mar. 11, 1990. Fruit setting: May 1, 1990. Harvested: Jun. 3, 1990.

#### 四、品系比較試驗：

於台南市安南區進行，供試品系台南九號等 12 個優良組合，以秋香及台南八號為對照品種。採 RCBD，三重複，畦長 5M，畦寬 2.4M，每畦種 10 株。試驗結果台南九號於 1990 年秋作花謝後35日成熟，表現極早熟，果型高球，網紋細密，果肉淡綠色，肉質柔軟芳香，肉厚 3.0 cm，糖分高達 14.5 Brix，果重 1.2~1.5 kg，平均 1.35 kg，每 0.1 ha 以種植 700 株計，產量達 2,378 kg，平均每株著果數 2.5 個。1991 年春作糖分含量更高達 15 Brix，平均果重 1.15 kg，每 0.1ha 產量 2,401 kg，每株著果數 2.98 個。兩期作白粉病在一般防治下發病情形均呈輕度 (R 級)，比對照品種秋香及台南八號抗病性較佳。綜合兩期作之試驗結果，台南九號等 6 個組合被選出晉級區域試驗。(表三)

Table 3. Horticultural characters and marketable yield of muskmelon in the line comparison trials.

| Crop                   | Hybrids                | Growth vigor | Fruit setting | Flowering to maturity (days) | Fruit shape | Skin color  | Net         | Flesh color | Flesh thickness (cm) |
|------------------------|------------------------|--------------|---------------|------------------------------|-------------|-------------|-------------|-------------|----------------------|
| Fall 1990              | TN.9                   | strong       | good          | 35                           | oval-round  | milk yellow | fine        | light green | 3.0                  |
|                        | 78-1                   | strong       | fair          | 46                           | oval-round  | green       | coarse      | green       | 3.0                  |
|                        | 78-3                   | strong       | good          | 37                           | oval-round  | yellow      | fine        | white       | 3.0                  |
|                        | 78-8                   | strong       | good          | 38                           | oval-round  | yellow      | coarse      | salmon      | 3.0                  |
|                        | 78-9                   | strong       | good          | 38                           | round       | yellow      | coarse      | salmon      | 3.0                  |
|                        | 78-10                  | strong       | fair          | 38                           | oval-round  | yellow      | coarse      | orange      | 3.0                  |
|                        | .                      | .            | .             | .                            | .           | .           | .           | .           | .                    |
|                        | C.T.(CK <sub>1</sub> ) | strong       | good          | 38                           | round       | yellow      | coarse      | salmon      | 3.0                  |
|                        | TN.8(CK <sub>2</sub> ) | strong       | good          | 36                           | round       | yellow      | coarse      | orange      | 3.0                  |
|                        | Spring 1991            | TN.9         | strong        | good                         | 40          | oval-round  | milk yellow | fine        | light green          |
| 78-1                   |                        | strong       | fair          | 53                           | oval-round  | green       | coarse      | green       | 3.0                  |
| 78-3                   |                        | strong       | good          | 42                           | oval-round  | yellow      | fine        | white       | 3.0                  |
| 78-8                   |                        | strong       | good          | 43                           | oval-round  | yellow      | coarse      | salmon      | 3.0                  |
| 78-9                   |                        | strong       | good          | 43                           | round       | yellow      | coarse      | salmon      | 3.0                  |
| 78-10                  |                        | strong       | fair          | 43                           | oval-round  | yellow      | coarse      | orange      | 3.0                  |
| .                      |                        | .            | .             | .                            | .           | .           | .           | .           | .                    |
| C.T.(CK <sub>1</sub> ) |                        | strong       | good          | 43                           | round       | yellow      | coarse      | salmon      | 3.0                  |
| TN.8(CK <sub>2</sub> ) |                        | strong       | good          | 41                           | round       | yellow      | coarse      | orange      | 3.0                  |

| Crop                   | Hybrids                | Placenta color | Placenta size | Texture | S.S.C (brix) | Fruit weight (kg) | Yield* (kg/0.1ha)   | Storage            | P.M.R.** |
|------------------------|------------------------|----------------|---------------|---------|--------------|-------------------|---------------------|--------------------|----------|
| Fall 1990              | TN.9                   | milk white     | middle        | fine    | 14.5         | 1.35              | 2,378 <sup>a</sup>  | good               | R        |
|                        | 78-1                   | milk white     | middle        | fine    | 13.3         | 1.50              | 1,932 <sup>c</sup>  | good               | MR       |
|                        | 78-3                   | white          | middle        | fine    | 13.5         | 1.35              | 2,326 <sup>a</sup>  | good               | R        |
|                        | 78-8                   | orange         | middle        | fine    | 12.8         | 1.20              | 2,135 <sup>b</sup>  | fair               | R        |
|                        | 78-9                   | orange         | middle        | fine    | 13.0         | 1.15              | 2,347 <sup>a</sup>  | fair               | R        |
|                        | 78-10                  | orange         | middle        | fine    | 13.2         | 1.40              | 2,025 <sup>bc</sup> | fair               | R        |
|                        | .                      | .              | .             | .       | .            | .                 | .                   | .                  | .        |
|                        | C.T.(CK <sub>1</sub> ) | orange         | middle        | fine    | 13.0         | 1.15              | 2,334 <sup>a</sup>  | fair               | MR       |
|                        | TN.8(CK <sub>2</sub> ) | light orange   | middle        | fine    | 12.7         | 1.18              | 2,324 <sup>a</sup>  | fair               | MR       |
|                        | Spring 1991            | TN.9           | milk white    | middle  | fine         | 15.0              | 1.15                | 2,401 <sup>a</sup> | good     |
| 78-1                   |                        | milk white     | middle        | fine    | 14.1         | 1.30              | 1,729 <sup>d</sup>  | good               | R        |
| 78-3                   |                        | white          | middle        | fine    | 14.3         | 1.15              | 2,428 <sup>a</sup>  | good               | R        |
| 78-8                   |                        | orange         | middle        | fine    | 13.4         | 1.05              | 2,018 <sup>c</sup>  | fair               | R        |
| 78-9                   |                        | orange         | middle        | fine    | 13.5         | 1.00              | 2,158 <sup>b</sup>  | fair               | R        |
| 78-10                  |                        | orange         | middle        | fine    | 13.6         | 1.22              | 2,156 <sup>b</sup>  | fair               | R        |
| .                      |                        | .              | .             | .       | .            | .                 | .                   | .                  | .        |
| C.T.(CK <sub>1</sub> ) |                        | orange         | middle        | fine    | 13.3         | 1.00              | 2,030 <sup>bc</sup> | fair               | MR       |
| TN.8(CK <sub>2</sub> ) |                        | light orange   | middle        | fine    | 13.0         | 1.00              | 1,995 <sup>c</sup>  | fair               | R        |

1. \*Means in the same column followed by the same letter do not differ significantly by Duncan's Multiple Range Test. (P=0.05)

2. \*\*See appendix 1.

3. Fall crop-Sown: Sep. 15, 1990. Fruit setting: Oct. 26, 1990. Harvested: Nov. 30, 1990.  
Spring crop-Sown: Dec. 15, 1990. Fruit setting: Feb. 25, 1991. Harvested: Apr. 05, 1991.

## 五、區域試驗：

於台南市安南區、台南縣七股鄉及東山鄉共三處進行。供試品系台南九號等 6 組合，以秋香、秋蜜及台南八號為對照品種。採 RCBD，四重複，畦長 10 m，畦寬 2.4 m，每畦種 20 株。試驗結果台南九號植株型態及果實性狀在區域試驗之表現均如品系比較試驗，1991 年秋作糖分含量安南區試區平均 13.5 Brix，比對照品種 12.0~12.2 Brix 高出 1.3~1.5 Brix，產量比對照品種亦顯著差異，每株平均著果數約 2.5 果（每 0.1 ha 700 株計）；七股試區糖分含量 13.3 Brix，亦比對照品種高 1.3~1.5 Brix，產量與對照品種相差亦顯著，每株平均著果數約為 2.3 果，略低於安南試區；東山試區每品系之糖分含量均提高，但台南九號仍高出對照品種 1.5~1.7 Brix，產量相差亦顯著，著果數平均每株 2.25 果（表四、表六）。1992 年春作因冬季較低溫及早春雨水較多，三個試區之產量均比 1991 年秋作低，平均果重較小，著果數亦略少，但網紋及外觀則比秋作表現良好，含糖分雖受影響，在安南區及七股試區仍有 13.5 Brix，東山試區尚有 13 Brix，均比對照品種高，品質亦佳（表五）。白粉病在一般防治下發病情形，台南九號兩期作表現均呈輕度（R 級）；貯藏性方面，台南九號表現比秋香及台南八號良好（表七）。

Table 4. Horticultural characters and marketable yield of muskmelon in the regional trial of 1991.

| Location               | Hybrids                | Growth vigor | Fruit setting | Flowering to maturity (days) | Fruit shape | Skin color  | Net    | Flesh color |
|------------------------|------------------------|--------------|---------------|------------------------------|-------------|-------------|--------|-------------|
| An-Nan                 | TN.9                   | strong       | good          | 34                           | oval-round  | milk yellow | fine   | light green |
|                        | 78-1                   | strong       | fair          | 44                           | oval-round  | green       | coarse | green       |
|                        | 78-3                   | strong       | good          | 36                           | oval-round  | yellow      | fine   | white       |
|                        | 78-8                   | strong       | good          | 37                           | oval-round  | yellow      | coarse | salmon      |
|                        | 78-9                   | strong       | good          | 37                           | round       | yellow      | coarse | salmon      |
|                        | 78-10                  | strong       | fair          | 37                           | oval-round  | yellow      | coarse | orange      |
|                        | C.T.(CK <sub>1</sub> ) | strong       | good          | 37                           | round       | yellow      | coarse | salmon      |
|                        | C.M.(CK <sub>2</sub> ) | strong       | good          | 34                           | oval        | yellow      | fine   | white       |
| TN.8(CK <sub>3</sub> ) | strong                 | good         | 35            | round                        | yellow      | coarse      | orange |             |
| Chi-Kou                | TN.9                   | strong       | good          | 35                           | oval-round  | milk yellow | fine   | light green |
|                        | 78-1                   | strong       | fair          | 46                           | oval-round  | green       | coarse | green       |
|                        | 78-3                   | strong       | good          | 37                           | oval-round  | yellow      | fine   | white       |
|                        | 78-8                   | strong       | good          | 38                           | oval-round  | yellow      | coarse | salmon      |
|                        | 78-9                   | strong       | good          | 38                           | round       | yellow      | coarse | salmon      |
|                        | 78-10                  | strong       | fair          | 38                           | oval-round  | yellow      | coarse | orange      |
|                        | C.T.(CK <sub>1</sub> ) | strong       | good          | 38                           | round       | yellow      | coarse | salmon      |
|                        | C.M.(CK <sub>2</sub> ) | strong       | good          | 35                           | oval        | yellow      | fine   | white       |
| TN.8(CK <sub>3</sub> ) | strong                 | good         | 36            | round                        | yellow      | coarse      | orange |             |
| Don-San                | TN.9                   | strong       | good          | 39                           | oval-round  | milk yellow | fine   | light green |
|                        | 78-1                   | strong       | fair          | 52                           | oval-round  | green       | coarse | green       |
|                        | 78-3                   | strong       | good          | 41                           | oval-round  | yellow      | fine   | white       |
|                        | 78-8                   | strong       | good          | 42                           | oval-round  | yellow      | coarse | salmon      |
|                        | 78-9                   | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | 78-10                  | strong       | fair          | 42                           | oval-round  | yellow      | coarse | orange      |
|                        | C.T.(CK <sub>1</sub> ) | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | C.M.(CK <sub>2</sub> ) | strong       | good          | 39                           | oval        | yellow      | fine   | white       |
| TN.8(CK <sub>3</sub> ) | strong                 | good         | 40            | round                        | yellow      | coarse      | orange |             |

(Continued Table 4.)

| Location               | Hybrids                | Flesh thickness (cm) | Placenta color | Placenta size | Texture | S.S.C (brix) | Fruit weight (kg) | Yield (kg/0.1ha) | Storage* | P.M.R.** |
|------------------------|------------------------|----------------------|----------------|---------------|---------|--------------|-------------------|------------------|----------|----------|
| An-Nan                 | TN.9                   | 3.2                  | milk white     | middle        | fine    | 13.5         | 1.30              | 2,286            | good     | R        |
|                        | 78-1                   | 3.2                  | milk white     | middle        | fine    | 12.4         | 1.42              | 1,887            | good     | R        |
|                        | 78-3                   | 3.0                  | white          | middle        | fine    | 12.6         | 1.32              | 2,252            | good     | R        |
|                        | 78-8                   | 3.0                  | orange         | middle        | fine    | 12.0         | 1.20              | 2,235            | fair     | R        |
|                        | 78-9                   | 3.0                  | orange         | middle        | fine    | 12.2         | 1.15              | 2,248            | fair     | R        |
|                        | 78-10                  | 3.0                  | orange         | middle        | fine    | 12.3         | 1.38              | 2,034            | fair     | R        |
|                        | C.T.(CK <sub>1</sub> ) | 3.0                  | orange         | middle        | fine    | 12.0         | 1.18              | 2,191            | fair     | R        |
|                        | C.M.(CK <sub>2</sub> ) | 3.0                  | white          | middle        | fine    | 12.2         | 1.32              | 2,209            | good     | MR       |
| TN.8(CK <sub>3</sub> ) | 3.0                    | light orange         | middle         | fine          | 12.0    | 1.20         | 2,126             | fair             | R        |          |
| Chi-Kou                | TN.9                   | 3.2                  | milk white     | middle        | fine    | 13.3         | 1.30              | 2,086            | good     | R        |
|                        | 78-1                   | 3.2                  | milk white     | middle        | fine    | 12.8         | 1.45              | 1,733            | good     | R        |
|                        | 78-3                   | 3.0                  | white          | middle        | fine    | 12.5         | 1.36              | 2,029            | good     | R        |
|                        | 78-8                   | 3.0                  | orange         | middle        | fine    | 11.8         | 1.23              | 2,004            | fair     | R        |
|                        | 78-9                   | 3.0                  | orange         | middle        | fine    | 12.0         | 1.17              | 2,048            | fair     | R        |
|                        | 78-10                  | 3.0                  | orange         | middle        | fine    | 12.2         | 1.35              | 1,839            | fair     | R        |
|                        | C.T.(CK <sub>1</sub> ) | 3.0                  | orange         | middle        | fine    | 11.8         | 1.16              | 1,978            | fair     | R        |
|                        | C.M.(CK <sub>2</sub> ) | 3.0                  | white          | middle        | fine    | 12.0         | 1.35              | 1,984            | good     | MR       |
| TN.8(CK <sub>3</sub> ) | 3.0                    | light orange         | middle         | fine          | 11.8    | 1.18         | 1,918             | fair             | R        |          |
| Don-San                | TN.9                   | 3.2                  | milk white     | middle        | fine    | 14.5         | 1.20              | 1,893            | good     | R        |
|                        | 78-1                   | 3.2                  | milk white     | middle        | fine    | 13.0         | 1.35              | 1,564            | good     | R        |
|                        | 78-3                   | 3.0                  | white          | middle        | fine    | 13.4         | 1.22              | 1,905            | good     | R        |
|                        | 78-8                   | 3.0                  | orange         | middle        | fine    | 12.9         | 1.10              | 1,837            | fair     | R        |
|                        | 78-9                   | 3.0                  | orange         | middle        | fine    | 13.2         | 1.12              | 1,910            | fair     | R        |
|                        | 78-10                  | 3.0                  | orange         | middle        | fine    | 13.3         | 1.32              | 1,723            | fair     | R        |
|                        | C.T.(CK <sub>1</sub> ) | 3.0                  | orange         | middle        | fine    | 13.0         | 1.10              | 1,838            | fair     | R        |
|                        | C.M.(CK <sub>2</sub> ) | 3.0                  | white          | middle        | fine    | 13.0         | 1.25              | 1,811            | good     | MR       |
| TN.8(CK <sub>3</sub> ) | 3.0                    | light orange         | middle         | fine          | 12.8    | 1.15         | 1,769             | fair             | R        |          |

1.\* Good : Stroge 8-10 days Fair: Stroge 5-7 days

2.\*\* See appendix 1.

3. An-Nan Sown : Sep. 04, 1991. Fruit setting : Oct. 08, 1991. Harvested : Nov. 11, 1991.  
 Chi-Kou Sown : Sep. 04, 1991. Fruit setting : Oct. 12, 1991. Harvested : Nov. 16, 1991.  
 Dou-San Sown : Sep. 30, 1991. Fruit setting : Nov. 10, 1991. Harvested : Dec. 19, 1991.

Table 5. Horticultural characters and marketable yield of muskmelon in the regional trial of 1992.

| Location               | Hybrids                | Growth vigor | Fruit setting | Flowering to maturity (days) | Fruit shape | Skin color  | Net    | Flesh color |
|------------------------|------------------------|--------------|---------------|------------------------------|-------------|-------------|--------|-------------|
| An-Nan                 | TN.9                   | strong       | good          | 39                           | oval-round  | milk yellow | fine   | light green |
|                        | 78-1                   | strong       | fair          | 52                           | oval-round  | green       | coarse | green       |
|                        | 78-3                   | strong       | good          | 41                           | oval-round  | yellow      | fine   | white       |
|                        | 78-8                   | strong       | good          | 42                           | oval-round  | yellow      | coarse | salmon      |
|                        | 78-9                   | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | 78-10                  | strong       | fair          | 42                           | oval-round  | yellow      | coarse | orange      |
|                        | C.T.(CK <sub>1</sub> ) | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | C.M.(CK <sub>2</sub> ) | strong       | good          | 39                           | oval        | yellow      | fine   | white       |
| TN.8(CK <sub>3</sub> ) | strong                 | good         | 40            | round                        | yellow      | coarse      | orange |             |
| Chi-Kou                | TN.9                   | strong       | good          | 39                           | oval-round  | milk yellow | fine   | light green |
|                        | 78-1                   | strong       | fair          | 52                           | oval-round  | green       | coarse | green       |
|                        | 78-3                   | strong       | good          | 41                           | oval-round  | yellow      | fine   | white       |
|                        | 78-8                   | strong       | good          | 42                           | oval-round  | yellow      | coarse | salmon      |
|                        | 78-9                   | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | 78-10                  | strong       | fair          | 42                           | oval-round  | yellow      | coarse | orange      |
|                        | C.T.(CK <sub>1</sub> ) | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | C.M.(CK <sub>2</sub> ) | strong       | good          | 39                           | oval        | yellow      | fine   | white       |
| TN.8(CK <sub>3</sub> ) | strong                 | good         | 40            | round                        | yellow      | coarse      | orange |             |
| Don-San                | TN.9                   | strong       | good          | 39                           | oval-round  | milk yellow | fine   | light green |
|                        | 78-1                   | strong       | fair          | 52                           | oval-round  | green       | coarse | green       |
|                        | 78-3                   | strong       | good          | 41                           | oval-round  | yellow      | fine   | white       |
|                        | 78-8                   | strong       | good          | 42                           | oval-round  | yellow      | coarse | salmon      |
|                        | 78-9                   | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | 78-10                  | strong       | fair          | 42                           | oval-round  | yellow      | coarse | orange      |
|                        | C.T.(CK <sub>1</sub> ) | strong       | good          | 42                           | round       | yellow      | coarse | salmon      |
|                        | C.M.(CK <sub>2</sub> ) | strong       | good          | 39                           | oval        | yellow      | fine   | white       |
| TN.8(CK <sub>3</sub> ) | strong                 | good         | 40            | round                        | yellow      | coarse      | orange |             |

(Continued Table 5.)

| Location               | Hybrids                | Flesh thickness (cm) | Placenta color | Placenta size | Texture | S.S.C (brix) | Fruit weight (kg) | Yield (kg/0.1ha) | Storage* | P.M.R.** |
|------------------------|------------------------|----------------------|----------------|---------------|---------|--------------|-------------------|------------------|----------|----------|
| An-Nan                 | TN.9                   | 3.0                  | milk white     | middle        | fine    | 13.5         | 1.20              | 2,047            | good     | R        |
|                        | 78-1                   | 3.0                  | milk white     | middle        | fine    | 12.0         | 1.35              | 1,680            | good     | R        |
|                        | 78-3                   | 3.0                  | white          | middle        | fine    | 12.4         | 1.22              | 2,024            | good     | R        |
|                        | 78-8                   | 3.0                  | orange         | middle        | fine    | 12.0         | 1.15              | 2,003            | fair     | R        |
|                        | 78-9                   | 3.0                  | orange         | middle        | fine    | 12.2         | 1.10              | 2,023            | fair     | R        |
|                        | 78-10                  | 3.0                  | orange         | middle        | fine    | 12.2         | 1.25              | 1,909            | fair     | R        |
|                        | C.T.(CK <sub>1</sub> ) | 3.0                  | orange         | middle        | fine    | 12.0         | 1.10              | 1,956            | fair     | R        |
|                        | C.M.(CK <sub>2</sub> ) | 3.0                  | white          | middle        | fine    | 12.0         | 1.23              | 1,984            | good     | MR       |
| TN.8(CK <sub>3</sub> ) | 3.0                    | light orange         | middle         | fine          | 11.8    | 1.15         | 1,911             | fair             | R        |          |
| Chi-Kou                | TN.9                   | 3.0                  | milk white     | middle        | fine    | 13.5         | 1.20              | 1,909            | good     | R        |
|                        | 78-1                   | 3.0                  | milk white     | middle        | fine    | 13.0         | 1.33              | 1,608            | good     | R        |
|                        | 78-3                   | 3.0                  | white          | middle        | fine    | 12.5         | 1.20              | 1,832            | good     | R        |
|                        | 78-8                   | 3.0                  | orange         | middle        | fine    | 12.0         | 1.10              | 1,796            | fair     | R        |
|                        | 78-9                   | 3.0                  | orange         | middle        | fine    | 12.3         | 1.05              | 1,838            | fair     | R        |
|                        | 78-10                  | 3.0                  | orange         | middle        | fine    | 12.5         | 1.25              | 1,675            | fair     | R        |
|                        | C.T.(CK <sub>1</sub> ) | 3.0                  | orange         | middle        | fine    | 11.8         | 1.05              | 1,757            | fair     | R        |
|                        | C.M.(CK <sub>2</sub> ) | 3.0                  | white          | middle        | fine    | 12.2         | 1.25              | 1,766            | good     | MR       |
| TN.8(CK <sub>3</sub> ) | 3.0                    | light orange         | middle         | fine          | 12.0    | 1.10         | 1,708             | fair             | R        |          |
| Don-San                | TN.9                   | 3.0                  | milk white     | middle        | fine    | 13.0         | 1.20              | 1,772            | good     | R        |
|                        | 78-1                   | 3.0                  | milk white     | middle        | fine    | 11.9         | 1.38              | 1,441            | good     | R        |
|                        | 78-3                   | 3.0                  | white          | middle        | fine    | 12.2         | 1.25              | 1,776            | good     | R        |
|                        | 78-8                   | 3.0                  | orange         | middle        | fine    | 11.8         | 1.15              | 1,708            | fair     | R        |
|                        | 78-9                   | 3.0                  | orange         | middle        | fine    | 12.0         | 1.10              | 1,778            | fair     | R        |
|                        | 78-10                  | 3.0                  | orange         | middle        | fine    | 12.0         | 1.25              | 1,605            | fair     | R        |
|                        | C.T.(CK <sub>1</sub> ) | 3.0                  | orange         | middle        | fine    | 11.9         | 1.10              | 1,697            | fair     | R        |
|                        | C.M.(CK <sub>2</sub> ) | 3.0                  | white          | middle        | fine    | 12.0         | 1.25              | 1,665            | good     | MR       |
| TN.8(CK <sub>3</sub> ) | 3.0                    | light orange         | middle         | fine          | 11.8    | 1.12         | 1,632             | fair             | R        |          |

1.\* Good: Stroge 8-10 days Fair: Stroge 5-7 days

2.\*\* See appendix 1.

3. An-Nan Sown: Dec. 22, 1991. Fruit setting: Mar. 08, 1992. Harvested: Apr. 16, 1992.  
 Chi-Kou Sown: Dec. 22, 1991. Fruit setting: Mar. 09, 1992. Harvested: Apr. 17, 1992.  
 Dou-San Sown: Dec. 22, 1991. Fruit setting: Mar. 12, 1992. Harvested: Apr. 20, 1992.

Table 6. Performance of marketable yield of muskmelon in regional trial.

| Hybrids  | Yield(kg/0.1ha)      |                      |                     |                     |                      |                     |
|----------|----------------------|----------------------|---------------------|---------------------|----------------------|---------------------|
|          | Fall 1991            |                      |                     | Spring 1992         |                      |                     |
|          | An-Nan               | Chi-Kou              | Don-San             | An-Nan              | Chi-Kou              | Don-San             |
| TN.9     | 2,286 <sup>a*</sup>  | 2,086 <sup>a</sup>   | 1,893 <sup>a</sup>  | 2,047 <sup>a</sup>  | 1,909 <sup>a</sup>   | 1,772 <sup>a</sup>  |
| 78-1     | 1,887 <sup>e</sup>   | 1,733 <sup>f</sup>   | 1,564 <sup>e</sup>  | 1,680 <sup>c</sup>  | 1,608 <sup>g</sup>   | 1,441 <sup>e</sup>  |
| 78-3     | 2,252 <sup>ab</sup>  | 2,029 <sup>abc</sup> | 1,905 <sup>a</sup>  | 2,024 <sup>a</sup>  | 1,832 <sup>bc</sup>  | 1,766 <sup>a</sup>  |
| 78-8     | 2,235 <sup>ab</sup>  | 2,004 <sup>bc</sup>  | 1,837 <sup>b</sup>  | 2,003 <sup>ab</sup> | 1,796 <sup>bcd</sup> | 1,708 <sup>b</sup>  |
| 78-9     | 2,248 <sup>ab</sup>  | 2,048 <sup>ab</sup>  | 1,910 <sup>a</sup>  | 2,023 <sup>a</sup>  | 1,838 <sup>b</sup>   | 1,778 <sup>a</sup>  |
| 78-10    | 2,034 <sup>d</sup>   | 1,839 <sup>e</sup>   | 1,723 <sup>d</sup>  | 1,909 <sup>b</sup>  | 1,675 <sup>f</sup>   | 1,605 <sup>d</sup>  |
| C.T.(CK) | 2,191 <sup>bc</sup>  | 1,978 <sup>cd</sup>  | 1,838 <sup>b</sup>  | 1,956 <sup>ab</sup> | 1,757 <sup>dc</sup>  | 1,697 <sup>b</sup>  |
| C.M.(CK) | 2,209 <sup>abc</sup> | 1,984 <sup>c</sup>   | 1,811 <sup>bc</sup> | 1,984 <sup>ab</sup> | 1,766 <sup>cde</sup> | 1,665 <sup>bc</sup> |
| TN.8(CK) | 2,126 <sup>c</sup>   | 1,918 <sup>d</sup>   | 1,769 <sup>cd</sup> | 1,911 <sup>b</sup>  | 1,708 <sup>ef</sup>  | 1,632 <sup>cd</sup> |

\*Means in the same column followed by the same letter do not differ significantly by Duncan's Multiple Range Test (P=0.05).



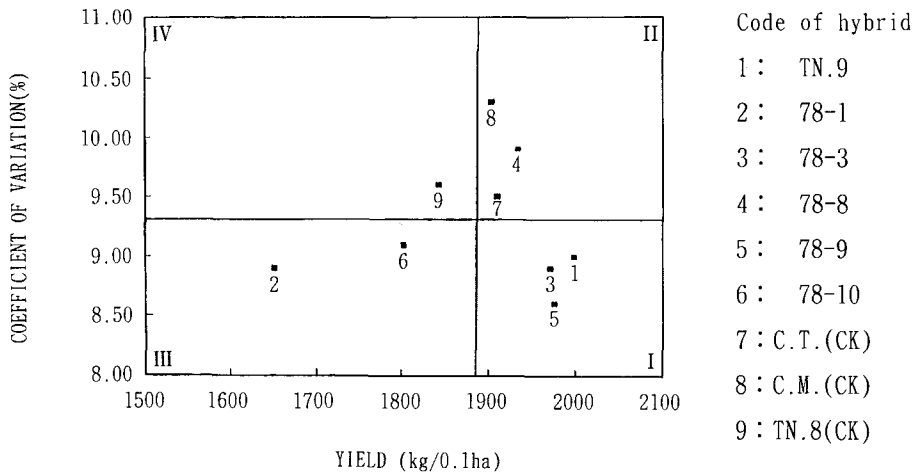


Fig 2. Stability analysis of yield for the 9 muskmelon hybrids.

穩定性分析係以區域試驗結果，依Eberhart, S. A. and W. A. Russell (1966, Crop Sci. 6: 36-40)<sup>(7)</sup>方法分析。台南九號（代號 1）產量及穩定性均優於對照品種（代號 78.9）。

Table 7. The storage quality of muskmelon variety Tainan 9.

| Crop           | Hybrids                | Before storage                              |               |                | Quality** |
|----------------|------------------------|---|---------------|----------------|-----------|
|                |                        | Maturity                                    | S.S.C. (Brix) | Hardness* (kg) |           |
| Fall<br>1991   | TN.9                   | with milk yellow<br>skin, no absciss layer  | 13.5          | 11.38          | good      |
|                | C.T.(CK <sub>1</sub> ) | with yellow green<br>skin, no absciss layer | 12.0          | 11.55          | good      |
|                | C.M.(CK <sub>2</sub> ) | with yellow green<br>skin, no absciss layer | 12.2          | 10.68          | good      |
|                | TN.8(CK <sub>3</sub> ) | with yellow green<br>skin, no absciss layer | 12.0          | 10.63          | good      |
| Spring<br>1992 | TN.9                   | with milk yellow<br>skin, no absciss layer  | 13.5          | 11.15          | good      |
|                | C.T.(CK <sub>1</sub> ) | with yellow green<br>skin, no absciss layer | 12.0          | 11.20          | good      |
|                | C.M.(CK <sub>2</sub> ) | with yellow green<br>skin, no absciss layer | 12.0          | 9.85           | good      |
|                | TN.8(CK <sub>3</sub> ) | with yellow green<br>skin, no absciss layer | 11.8          | 9.50           | good      |

(Continued Table 7.)

| Crop           | Hybrids                | Appearance   | After storage    |                   |                   |           | Storage day<br>(day/mon) |
|----------------|------------------------|--|------------------|-------------------|-------------------|-----------|--------------------------|
|                |                        |  | S.S.C.<br>(Brix) | Hardness*<br>(kg) | Water loss<br>(%) | Quality** |                          |
| Fall<br>1991   | TN.9                   | have absciss layer, stem end pitting, skin browning and loss water | 12.0             | 4.36              | 2.05              | qair      | 10(15-24/Nov)            |
|                | C.T.(CK <sub>1</sub> ) | have absciss layer, stem end pitting, skin browning and loss water | 10.5             | 4.31              | 2.80              | qair      | 7(15-21/Nov)             |
|                | C.M.(CK <sub>2</sub> ) | have absciss layer, stem end pitting, skin browning and loss water | 10.6             | 4.50              | 2.10              | qair      | 9(15-23/Nov)             |
|                | TN.8(CK <sub>3</sub> ) | have absciss layer, stem end pitting, skin browning and loss water | 10.4             | 4.39              | 2.74              | qair      | 6(15-20/Nov)             |
| Spring<br>1992 | TN.9                   | have absciss layer, stem end pitting, skin browning and loss water | 12.0             | 4.31              | 2.13              | qair      | 8(20-27/Apr)             |
|                | C.T.(CK <sub>1</sub> ) | have absciss layer, stem end pitting, skin browning and loss water | 10.5             | 4.25              | 2.75              | qair      | 5(20-24/apr)             |
|                | C.M.(CK <sub>2</sub> ) | have absciss layer, stem end pitting, skin browning and loss water | 10.5             | 4.35              | 2.21              | qair      | 8(20-27/apr)             |
|                | TN.8(CK <sub>3</sub> ) | have absciss layer, stem end pitting, skin browning and loss water | 10.3             | 4.20              | 2.73              | qair      | 5(20-24/apr)             |

1.\* Hardness has tested with Penetrometer (Italtest FT327, with 8mm plug)

2.\*\*Quality means sensory evaluation of fruit.

3. Numbers of test fruits : 5 fruits before storage, 6 fruits after storage.

## 六、地方試作：

於台南縣佳里鎮及嘉義縣太保市進行。供試品系台南九號、秋香、秋蜜及台南八號等四品種。採 RCBD，二重複，畦長 20 m，畦寬 2.4 m，株距 50 cm，二行植。試驗結果台南九號產量仍達區域試驗水準，每株平均著果數亦在 2.3 果（每 0.1 ha 700 株計），在高溫期（5/26 及 5/28）採收，果實之糖分含量仍達 13.5~14.0 Brix，比對照品種高出甚多。（表八）

Table 8. Horticultural characters and yield of muskmelon in the local trial of 1992.

| Location | Hybrids                | Growth vigor | Fruit setting | Flowering to maturity (days) | Fruit shape | Skin color  | Net    | Flesh color | Flesh thickness (cm) |
|----------|------------------------|--------------|---------------|------------------------------|-------------|-------------|--------|-------------|----------------------|
| Chai-Li  | TN.9                   | strong       | good          | 34                           | oval-round  | milk yellow | fine   | light green | 3.2                  |
|          | C.T.(CK <sub>1</sub> ) | strong       | good          | 37                           | round       | yellow      | coarse | salmon      | 3.0                  |
|          | C.M.(CK <sub>2</sub> ) | strong       | good          | 34                           | oval-round  | yellow      | fine   | white       | 3.0                  |
|          | TN.8(CK <sub>3</sub> ) | strong       | good          | 35                           | round       | yellow      | coarse | orange      | 3.0                  |
| Tai-Pou  | TN.9                   | strong       | good          | 35                           | oval-round  | milk yellow | fine   | light green | 3.2                  |
|          | C.T.(CK <sub>1</sub> ) | strong       | good          | 38                           | round       | yellow      | coarse | salmon      | 3.0                  |
|          | C.M.(CK <sub>2</sub> ) | strong       | fair          | 35                           | oval-round  | yellow      | fine   | white       | 3.0                  |
|          | TN.8(CK <sub>3</sub> ) | strong       | good          | 36                           | round       | yellow      | coarse | orange      | 3.0                  |

(Continued Table 8.)

| Location | Hybrids                | Placenta color | Placenta size | Texture | S.S.C (brix) | Fruit weight (kg) | Yield* (kg/0.1ha) | Storage** | P.M.R.*** |
|----------|------------------------|----------------|---------------|---------|--------------|-------------------|-------------------|-----------|-----------|
| Chai-Li  | TN.9                   | milk white     | middle        | fine    | 14.0         | 1.35              | 2,173             | good      | R         |
|          | C.T.(CK <sub>1</sub> ) | orange         | middle        | fine    | 11.0         | 1.20              | 1,932             | fair      | R         |
|          | C.M.(CK <sub>2</sub> ) | white          | middle        | fine    | 10.5         | 1.40              | 2,058             | good      | MR        |
|          | TN.8(CK <sub>3</sub> ) | light orange   | middle        | fine    | 11.0         | 1.25              | 1,864             | fair      | R         |
| Tai-Pou  | TN.9                   | milk white     | middle        | fine    | 13.5         | 1.40              | 2,245             | good      | R         |
|          | C.T.(CK <sub>1</sub> ) | orange         | middle        | fine    | 10.5         | 1.20              | 1,958             | fair      | R         |
|          | C.M.(CK <sub>2</sub> ) | white          | middle        | fine    | 10.0         | 1.40              | 2,375             | good      | MR        |
|          | TN.8(CK <sub>3</sub> ) | light orange   | middle        | fine    | 10.5         | 1.25              | 2,050             | fair      | R         |

1.\* Means in the same column followed by the same letter not significantly by Duncan's multiple comparison test (P=0.05).

2.\*\* Good: Storage 8-10 days Fair: Storage 5-7 days

3.\*\*\* See appendix 1.

4. Chai-Li Sown: Feb. 28. 1992. Fruit Setting: Apr. 22. 1992. Harvested: May. 26. 1992.  
Tai-Pou Sown: Feb. 28. 1992. Fruit Setting: Apr. 23. 1992. Harvested: May. 28. 1992.

### 七、白粉病抗病性檢定：

於台南本場進行。供試品系台南九號、秋香、秋蜜、台南八號等四品種。網室土耕直立栽培，株距 0.5 m，每組合種植 10 株，順序排列，二重複。檢定結果如下表。

Table 9. Reaction of muskmelon variety Tainan 9 to powdery mildew disease.

| Hybrid   | Fall 1991    |                      | Spring 1992  |                      |
|----------|--------------|----------------------|--------------|----------------------|
|          | Infection(%) | Level of resistance* | Infection(%) | Level of resistance* |
| TN.9     | 7.6          | MR                   | 9.5          | MR                   |
| C.T.(CK) | 18.2         | MS                   | 20.7         | MS                   |
| C.M.(CK) | 45.5         | S                    | 49.6         | S                    |
| TN.8(CK) | 10.2         | MR                   | 12.8         | MR                   |

1.\*See Appendix 1.

2. Fall Crop-Sown: Sep. 26. 1991. Investigation: Nov. 10. 1991.  
Spring Crop-Sown: Mar. 06. 1992. Investigation: May. 01. 1992.

## 台南九號之品種特性

- 一、種子：紡錘形，大小中等（長 10.9 mm，寬 4.0 mm，厚 1.5 mm），千粒重 26.3 g，種皮茶色。
- 二、子葉：長橢圓形，大小中等（長 4.4 cm，寬 1.8 cm），綠色。
- 三、莖蔓：主蔓粗細中等，節間中等（長6.51 cm），分枝性多，株型普通，生長勢強。
- 四、葉片：葉片大小中等，葉濃綠色，葉緣缺刻淺成波浪狀，裂葉深度及長度（Prominence of lobing and length of terminal lobe）中等，葉狀成心形，葉尖鈍。
- 五、花：雌花始花期春作播種後 55 天，秋作播種後 28 天，始花節位在母蔓第 4 節之子蔓或子蔓第 1 節之孫蔓，子房橢圓形，子房大小中等（縱徑 21.23 mm，橫徑 7.77 mm），子房茸毛短，密度中等，花性為雄花兩性花同株型。
- 六、開花成熟：開花至採收日數春作 39~40 天，秋作 33~35 天，播種至採收日數春作 116~120 天，秋作 65~70 天，子蔓及孫蔓結果。
- 七、果實：高球型（縱徑 12.7~16.0 cm，橫徑 11.8~13.8 cm），果重 1.15~1.50 kg，果皮乳黃色，果梗長度中等（3.0 cm），果臍部平，果臍圈小，果蒂大小中等，成熟時有離層，果皮無斑紋，果皮網紋細密，果皮薄（0.5 cm），果面無條溝及粗裂紋，果瓢（胎座）乳白色，果肉淡綠色，果肉質地細軟，肉厚 3.0~3.2 cm，風味佳，糖度 13.0 Brix 以上，果肉汁液中等，裂果難，結果數中等，每株 2~3 果，貯藏性佳，春果可貯藏 8 天，晚秋果 10 天。
- 八、抗病性及環境適應性：抗白粉病（抗病等級為R-MR級），適合嘉南地區秋冬裡作或早春栽培。

## 結 論

台南九號洋香瓜之育成，自 1984 年引種，其後歷經雜交、自交系之育成、組合力檢定、品系比較試驗、區域試驗及地方試作，而於 1992 年 12 月 17 日農林廳作物命名小組審查會議通過命名，前後有九年時間，在這漫長的育種過程中，自交系的選拔、育成就耗了一半時間，母本 HG5-1-4-6-1-1 具早熟及穩定的高糖分含量，是被選中之主要因素，而父本 TW3-2-6-4-1 為 WMR29 後代，也因其高度抗白粉病及肉質、網紋、果型優異而從 Cinco 等雜交後代脫穎而出，其後幾年的雜交組合試驗能順利完成而選育出台南九號，除了感謝農委會、農林廳及本場場長陳博士在經費等各方面的支援外，育種計畫的工作伙伴也在此一併誌謝。

茲將本品種之優缺點及栽培上應注意事項條述於後，期供栽培本品種之參考。

### 台南九號之優點及缺點

- 一、優點：1.早熟：春作 39~40 天，秋作 33~35 天，晚秋作 39 天可成熟。2.糖分高：不論春

作、秋作，甚至於春夏作糖分含量均在 13.0 Brix 以上。3.果實美觀：高球型、網紋細密、果肉淡綠、果皮乳黃、美觀。4.產量穩定：果重 1.15—1.50 kg，每株平均著果數 2.25—2.98 個，產量穩定。5.抗白粉病：在施藥防治下白粉病發生均呈輕微（R 級），不施藥檢定結果為 MR 級。

二、缺點：果蒂 1 cm 周圍網紋形成不易。

### 栽培管理應注意事項

1.播種適期：9 月下旬至翌年 2 月下旬。2.適栽地區：嘉南地區水稻後作之壤土或粘質壤土種植，避免連作。3.栽培密度：行距 2.4—2.5 m，株距 50—60 cm，每 0.1 ha 約 700 株之密度種植。4.整枝管理：依慣行法行雙蔓或單蔓整枝均可，留果位置春作 8—12 節，秋作 5—10 節。5.施肥管理：每 0.1 ha N:P<sub>2</sub>O<sub>5</sub>:K<sub>2</sub>O 化學肥料用量約為 12:16:16 kg，另加有機肥料 500—800 kg，畦面覆蓋銀黑色塑膠布，一次施用為原則。6.病蟲害防治：利用 PE 布隧道式栽培，台南九號抗白粉病強，白粉病可視發病情形減少防治次數，其他病蟲害防治與目前推廣品種同。7.採收：果皮稍變乳黃，在離層未發生或 1/4 發生時採收。

### 附錄一

白粉病抗病等級：白粉病罹病度以病斑面積佔葉面積百分比來計算，調查時期為春作播種後 60 天，秋作播種後 45 天，每品種調查 10 株。

$n_0$ ：葉片上無病斑。

$n_1$ ：病斑面積佔葉面積5%以下之葉片數。

$n_2$ ：病斑面積佔葉面積6—15%之葉片數。

$n_3$ ：病斑面積佔葉面積16—30%之葉片數。

$n_4$ ：病斑面積佔葉面積31—60%之葉片數。

$n_5$ ：病斑面積佔葉面積60%以上之葉片數。

由病斑面積換算成罹病度之公式為  $5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1 / 6N \times 100\%$  (N為調查總葉數)

白粉病抗病等級依罹病度分為 6 級：

| 等 級   | 罹 病 度    |
|-------|----------|
| 0. HR | 0%       |
| 1. R  | 1—5 %    |
| 2. MR | 5.1—15%  |
| 3. MS | 15.1—30% |
| 4. S  | 30.1—60% |
| 5. HS | 60.1以上%  |

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# Breeding of a New Muskmelon Variety Tainan 9<sup>1</sup>

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## Summary

A new F<sub>1</sub> hybrid of muskmelon (*Cucumis melo* var. *reticulatus*) variety Tainan 9 was released by the Tainan District Agricultural Improvement Station (DAIS) in 1992. The maternal line HG5-1-4-6-1-1 was selected in 1989 from the progenies of a cross made in 1985 between Honey Dew and a inbred line G41115 selected at the Tainan DAIS. The parental line Tw3-2-6-4-1 was obtained in 1988 from the progenies of a cross also made in 1985 between the inbred line TN151-1 and WMR 29 selected at the Tainan DAIS. The two lines HG5-1-4-6-1-1 and TW3-2-6-4-1 were then crossed in the fall of 1989 to obtain the line Tainan Test Cross 78-13, i.e. the code number of Tainan 9 in the breeding process before naming. Due to its superior characteristics in the combining ability test, line comparison trials, regional trials, local trials, screening for resistance to powdery mildew and storage tests, the line 78-13 was selected and submitted to the Committee of Registration for New Crop Variety of the Taiwan Provincial Department of Agriculture & Forestry, and was finally named Tainan 9 on 17 December 1992 at the Tainan DAIS. The characteristics of this variety include early maturation, more resistant to powdery mildew, medium fruit size with milk-yellow skin and light-green flesh, higher soluble solids content and longer shelf-life, oval-round fruit shape with fine and dense nets on the surface, and stable yield. It can also be grown under relatively higher temperatures with good quality.

Key Words : breeding, muskmelon, Tainan 9.

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