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CARIBBEAN FOOD CROPS SOCIETY

PROCEEDINGS



**ELEVENTH ANNUAL
MEETING**

THE EVALUATION OF CABBAGE (*BRASSICA OLERACEA* VAR *CAPITATA*) VARIETIES IN THE LEEWARD ISLANDS¹

by

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INTRODUCTION

In 1971 work was begun to evaluate the performance of certain varieties of cabbage in the Leeward Islands. In St. Kitts and Montserrat the cultivar commonly used by farmers is Copenhagen Market, while in Antigua, the variety preferred is All Seasons.

MATERIALS AND METHODS

At least eight trials were established in the Islands to compare the performance of the cultivars Copenhagen Market, Early Round Dutch, Ferry Round Dutch, Golden Acre, Globe 62 M. y.r., Green Back y.r. and Marion Market y.r. Four of these could not be carried to completion because of the effects of severe drought conditions at certain periods during the growth of the crop and heavy infestations of *Plutella* which could not be controlled even by twice weekly spraying with Basudin (Diazinon). The four trials completed were sited at Mt. Pleasant Estate, St. Kitts.

The seedlings were first grown in nursery beds and transplanted to the field. Each plot consisted of 128 plants in rows 4.9 m long and 60 cm

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apart with the plants 46 cm apart within the row. At transplanting the soil was treated with Dacthal (or Dymid) at the rate of 5.7 kg/ha to control weeds. Subsequent weed control was by hand. A basal dressing of 12-12-12 NPK fertilizer was applied at 578 kg/ha when the transplants became fully established.

The plants were sprayed at weekly intervals with either Basudin, Lannate or Toxaphene to control insect pests. The fungicides Dithane M 45 or Kocide 101 were incorporated into the spray.

RESULTS AND DISCUSSION

It was difficult to establish these experiments satisfactorily because of limiting moisture conditions at critical stages (e.g. immediately after transplanting) in the growth of the crop. The control of *Plutella* by the use of the insecticides Basudin or Lannate was not satisfactory. From other investigations with cabbage it appeared that this insect could be controlled quite effectively with Dipel (*Bacillus thuringensis*).

The mean yields of marketable cabbage in tons/hectare are shown in Table 1. Yields were generally low, with the size of heads small. Splitting was most pronounced in the Golden Acre and Copenhagen Market varieties particularly when rainfall was unevenly distributed. It was apparent that under a rainfed system of production, fruit size quality and yield could be seriously affected by adverse weather conditions.

Treatment differences were not significant, but the data summarised over the four trials (Table 2 show) that Marion Market was the best performer.

It is planned to continue this work and to include hybrid varieties such as Head Start, Market Prize, Market Topper as well as Japanese hybrid varieties into the programme.

Table 1

Means Yields of Marketable Cabbage in Tons/hectare (Means having the same letters are not significantly different at the 5.0% level by Duncan's Multiple Range Test)

Expt. No.	Design	Planting Date	Variety	Yield	Average Wt. fruit kg.	Notes
1	7x5 RCB	1 Sept. 1971	Marion Market	10.0	0.41	Size of heads generally small but splitting negligible. Spraying had to be done twice weekly.
			Globe 62-M	9.9	0.43	
			Ferry Round Dutch	8.0	0.38	
			Green Back	7.7	0.41	
			Copenhagen Market	7.1	0.29	
			Early Round Dutch	6.6	0.35	
2	7x3 RCB	17 Sept. 1971	Golden Acre	6.2	0.27	
			Green Back	10.1	0.53	
			Marion Market	7.6	0.44	
			Copenhagen Market	6.7	0.33	
			Globe 62-M	5.7	0.41	
			Ferry Round Dutch	5.5	0.39	
3	7x4 RCB	1 Oct. 1971	Early Round Dutch	5.5	0.35	
			Golden Acre	4.6	0.26	
			Marion Market	15.9	0.74	
			Globe 62-M	11.4	0.67	
			Early Round Dutch	12.9	0.60	Expt. suffered from water-logging in some areas due to poor

Table 1 — Cont'd.
Means Yields of Marketable Cabbage in Tons/hectare (Means having the same letters are not significantly different at the 5.0% level by Duncan's Multiple Range Test) — Cont'd

Expt. No.	Design	Planting Date	Variety	Yield	Average Wt. fruit Kg.	Notes
3	7x4 RCB	1 Oct. 1971	Green Back	10.8	0.70	drainage. Incidence of Plutella very severe limit-marketable yields and quality.
			Ferry Round Dutch	10.7	0.62	
			Copenhagen Market	10.6	0.50	
			Golden Acre	10.5	0.46	
4	7x4 RCB	25 Oct. 1971	Early Round Dutch	7.7	0.32	Severe drought conditions. Problem with the control of Plutella.
			Marion Market	7.1	0.39	
			Copenhagen Market	6.8	0.32	
			Golden Acre	6.1	0.30	
			Green Back	5.3	0.37	
			Ferry Round Dutch	4.6	0.28	
			Globe 62-M	4.2	0.38	

Table 2**Mean yields of marketable cabbage (averaged over four trials)**

Variety	Yield Tons/ha
Marion Market y.r.	10.1
Green Back y.r.	8.5
Early Round Dutch	8.2
Copenhagen Market	7.8
Globe 62 M y.r.	7.8
Ferry Round Dutch	7.2
Golden Acre	6.8

SUMMARY

Four trials were carried out to evaluate the performance of seven cultivars of cabbage. (*Brassica oleracea* var. *capitata*) in St. Kitts. Limiting soil moisture conditions and heavy infestations by *Plutella*, affected yields which were generally low. Treatment differences were not significant but the yields of marketable fruit in tons/hectare summarised over the four trials were: Marion Market, 10.1; Green Back, 8.5; Early Round Dutch, 8.2; Copenhagen Market, 7.8; Globe 62-M, 7.8; Ferry Round Dutch, 7.2; and Golden Acre, 6.8.

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