



HOT PEPPER VARIETIES FOR COMMERCIAL PRODUCTION IN THE CARIBBEAN

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● INTRODUCTION

This publication guides the suitable selection of hot pepper varieties. Hot peppers (*Capsicum chinense* Jacq) may have various shapes, sizes and colours in order to meet the demands of a diverse local and international market in many Caribbean countries. Producers will cultivate different types according to market preference and productivity.

● VARIETAL TYPES

There are four distinct categories according to standard scientific classification as follows:

Pure line variety: A population of plants with a constantly similar set of characteristics like colour, shape and taste. Breeders must isolate pure line cultivations in order to obtain uniformity and prevent crossing. Producers may replant seeds in a future cultivation. These plants are usually developed by institutions such as the Caribbean Agricultural Development and Research Institute (CARDI) and seed companies.

Hybrid variety: A population of plants with a constantly similar set of characteristics like colour, shape and taste. However these plants are crosses between pure line varieties and producers may not replant seeds. Because they are hybrids, they do not produce similar plants in the future. Seed companies sell these varieties.

Landrace: A population of plants which farmers select for important agronomic and economic features. Producers will make their selections during repeated cultivation cycles.

Improved Landrace: A population of plants which farmers originally select for important agronomic and economic features. Producers will make their selections during repeated cultivation cycles.

CARDI reviews these varieties, confirms their suitability and establishes uniformity for future cultivations.

● QUALITY SEEDS AND SEEDLINGS

Producers must use quality seeds. All seeds must germinate at the same time, with similar early growth habits. Look for vigorous growth and seeds which do not have soil borne diseases. Test a small quantity of seeds for these qualities.

Select strong seedlings from reputable sources which cultivate young plants in ideal growing conditions. Secure adequate knowledge about the production potential of the young plants. These plants must produce many fruits.

Aim for the required market whether this is for processing or fresh fruit. The producer must be aware of the type of regional, local or international demand which the variety satisfies.

The variety must be suitable to climatic and other environmental conditions in which the producer intends to cultivate the crop. The plants must be tolerant to the important diseases which affect the crop.

● MARKET PREFERENCE

The fresh fruit market prefers a large fruit, greater than 10 g (0.35 oz) with a thick flesh, a deep green colour when immature which turns dark red when ripe. The fruits should be of medium-to-high pungency with a strong flavor and aroma. The export markets look for large, round, smooth and attractive fruit.

The processing market prefers a fruit with high aroma, high pungency and deep pigmentation.

● PRODUCTIVITY

Reports indicate a variable range of crop yields from 2,250 to 27,000 kg/hectare (5,000 to 60,000 lb per acre). There are several production factors which affect the eventual yield of hot peppers.

Use adequate supplies of irrigated water especially during periods of drought. Control pest and diseases. Use the correct spacing for the intended variety and its production system. Ensure a fertile soil.

Since 2003, CARDI, University of the West Indies (UWI) lead farmers and other supporting institutions have identified suitable types of hot pepper plants for cultivation in the Caribbean region. Table 1 lists the Caribbean hot pepper varieties and their important characteristics.

There are several other commonly grown commercial landraces which are popular in different islands. These include: Peggy Mouth (Antigua), Goat Pepper (Bahamas), Bonnie Pepper (Barbados) and Bonda Majaque (Dominica and St. Lucia). Consumers and producers know these types of hot peppers within the local environments. CARDI has begun to characterise and establish uniform types for commercial production.

There are also a regional germplasm collections of over 100 accessions housed by CARDI at Graeme Hall, Barbados and by the UWI at St Augustine, Trinidad. Future initiatives will use these resources to produce suitable varieties for production systems.

Plates 1 - 10 show sample selections of available varieties..

Table 1: Caribbean hot pepper varieties

Name	Market	Source of quality seed	Colour
Yellow Scotch Bonnet	Fresh fruit and processed	Ministry of Agriculture and Fisheries, Bodles, Jamaica	Yellow
West Indies Red	Fresh fruit and processed	CARDI, Antigua	Red
CARDI Green	Fresh fruit and processed	CARDI, Antigua	Red
Habanero	Fresh fruit and processed	Imported from Central America and Florida	Red and yellow
Big Sun	Fresh fruit	Imported from Florida and Asia	Yellow
Tiger Teeth	Sauces	CARDI, Barbados	Red
Cayenne Pepper	Dried and ground	CARDI, Barbados	Red
Wirri Wirri	Pickle	CARDI, Barbados	Red
CARDI Moruga Red	Fresh fruit and processed	Available from selected garden shops in Trinidad	Red
CARDI Congo Pepper	Fresh fruit and processed	CARDI, Barbados	Red



Plate 1: West Indies Red



Plate 2: CARDI Green



Plate 3: CARDI Faria



Plate 4: CARDI Hood



Plate 5: CARDI Red Congo



Plate 6: CARDI Moruga Red



Plate 7: Tiger Teeth



Plate 8: Pimento



Plate 9: Yellow Scotch Bonnet



Plate 10: Habanero

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