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Michigan State University Agricultural Experiment Station and Cooperative Extension Service

Research Report

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RESEARCH REPORT 236

FROM THE MICHIGAN STATE UNIVERSITY
AGRICULTURAL EXPERIMENT STATION EAST LANSING

FARM SCIENCE

SONNETTE — A New TMV Resistant Bell Pepper

By S. Honma, H. H. Murakishi and H. C. Price¹

INTRODUCTION

A large percentage of the bell or sweet peppers produced in Michigan is for the fresh market. Approximately 15 to 20% of the total pepper acreage in Michigan is in bell peppers. For the last decade most of the bell peppers processed have been limited to pickling; however, there is a renewed interest in their use as a frozen product.

Growers need a good yielding variety that produces a high percentage of four-lobed fruits and is resistant to local strains of tobacco mosaic virus. SONNETTE, developed at the Michigan Agricultural Experiment Station, is designed to meet these needs.

PEDIGREE

SONNETTE was developed from crossing an F₂ line originating from the cross Morgold x California Wonder with Keystone Resistant Giant. Early generation screening of seedlings for tobacco mosaic virus resistance was made in the greenhouse by artificial inoculations, and advanced generation screenings were made by natural infestations at the Michigan State University Experimental Farm at Sodus, Michigan. Many selections were made for type, shape, foliage cover, yield and resistance. In the F₈ generation one selection was placed in isolation for seed increase and released.



Fruit set of Sonnette.

¹Professor, Horticulture; Professor in Botany and Plant Pathology, and Assistant Professor, Horticulture, respectively.

DESCRIPTION

Plant and Fruit

Plants of SONNETTE are upright, semi-spreading, 22 to 24 in. high, with large leaves to protect the fruits from sunscald. The vigorous and sturdy plants tend to resist wind and picking breakage. The fruits are borne pendant and well distributed on the plant. The uniform fruits are 2½ to 3 in. wide and 4 to 4½ in. long.

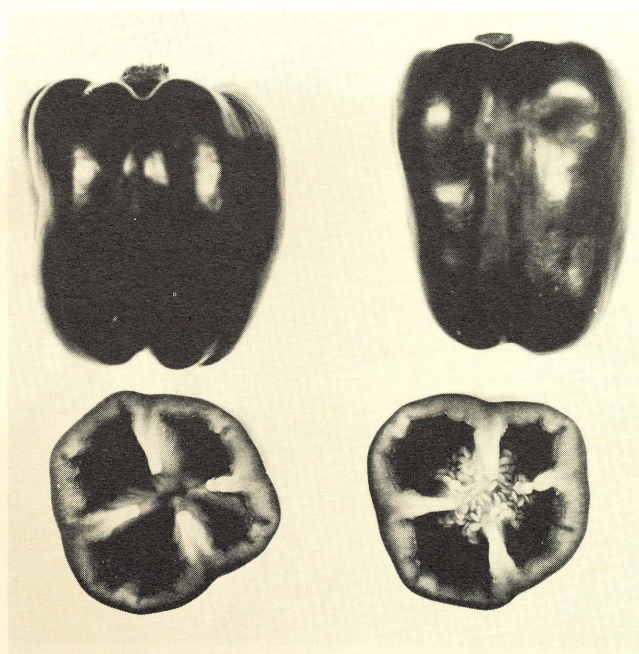
The seed bearing area of the fruit is small and fruit skin is of medium thickness. The thick fleshed (6 to 8 mm) fruits weigh 5 to 6 oz. at maturity, depending on the growing conditions. The dark green fruits turn dark red at full maturity. Plants of SONNETTE produce a high number (45 to 70%) of 4-lobed or lobed fruits.

Quality

Fruits of SONNETTE when harvested for the fresh market are sweet and mild in flavor. In limited freezing trials, the variety has been satisfactory as a frozen product.

Adaptability

Trials in Michigan and other states indicate the variety can be adapted to a wide range of environmental conditions. It has given satisfactory performance over a period of 4 years at East Lansing and 2 years at Sodus, Michigan. Maturity is a few days earlier than Early Cal Wonder, Midway and Fordhook.



Cross section of Sonnette fruits showing thick walls.

Yields

Results of trials at East Lansing show that SONNETTE yielded as well or better than California Wonder, Keystone Resistant Giant, Spartan Emerald and Titan.