'Kaala' and 'Waialua' Peppers

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Additional index words. *Capsicum annuum*

'Kaala', a bell-type pepper (*Capsicum annuum* L.) (Fig. 1), and 'Waialua', a jalapeño-type pepper (*Capsicum annuum* L.) (Fig. 2), were released by the College of Tropical Agriculture and Human Resources. The cultivars were developed for those areas in Hawaii and in the subtropics that have limited pepper production because of bacterial wilt (*Pseudomonas solanacearum* E. F. Sm.) disease.

Origin

'Kaala' and 'Waialua' were the result of a cross between 'Chabai Merah' and 'Keystone Resistant Giant'. 'Chabai Merah' is a standard cayenne-type pepper grown in western Malaysia and is highly resistant to bacterial wilt and to root-knot nematode [*Meloidogne incognita* (Kofoid & White) Chitwood]; it is a very pungent fruit that averages 7.5 to 10 cm in length and 2 cm in diameter. 'Keystone Resistant Giant' is a bell- or sweet-type pepper. The objectives of the cross were to obtain bell and pungent types resistant to bacterial wilt disease and root-knot nematode.

Description

'Kaala' and 'Waialua' are the result of 15 years of continuous selection in bacterial wilt-infested test plots. Field experiments were designed so that test plants were planted alternately with susceptible tomato controls (*Lycopersion esculentum* Mill. cv. Yellow Plum). Resistance was demonstrated by those plants surviving to maturity. The average fruit of 'Kaala' are 8.2 cm long and 6.6 cm wide with an average weight of 102 g. Fruit are predominantly three-lobed semi-bell in shape and is thick walled and nonpungent. Attempts to increase fruit size through backcrossing resulted in a reduced level of bacterial wilt resistance. 'Kaala' is resistant to bacterial wilt at moderate temperatures (<27 °C). The effectiveness of resistance is greatly reduced when 'Kaala' is grown at >27 °C. 'Kaala' should be

jalapeño in shape and size. The fruit average 7 cm long and 2.8 cm wide with an average weight of 26.0 g. The fruit is thick walled and pungent. 'Waialua' is highly resistant to bacterial wilt and its resistance does not break down at >27 °C. It also is resistant to root-knot nematode, as its roots show very few knots to none.

Availability

Limited quantities of 'Kaala' and 'Waialua' seed may be obtained by addressing requests to Seed Program, c/o Richard Sakuoka, Dept. of Horticulture, Room 112, 3190 Maile Way, Univ. of Hawaii, Honolulu, HI 96822.

planted in cooler seasons or at intermediate elevations in the tropics. It is resistant to root-knot nematodes as its roots show very few knots to none.

'Waialua' produces fruit that resemble

Fig. 1. Fruit of 'Kaala' pepper.

Fig. 2. Fruit of 'Waialua' pepper.

Received for publication 12 Mar. 1996. Accepted for publication 30 June 1996. The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked advertisement solely to indicate this fact.