



‘Coral 10’ red bean (*Phaseolus vulgaris* L.) cultivar adapted to Cuban production systems

‘Coral 10’, cultivar de frijol (*Phaseolus vulgaris* L.) rojo adaptado a los sistemas productivos de Cuba

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ABSTRACT: The objective of this work is to present the new bean cultivar ‘Coral 10’. The origin of this cultivar, was a selection of the SCR 5 line, which was achieved by hybridization between NCB226 x RCB591/-MC-2C-MC-11C-MC at the International Center for Tropical Agriculture (CIAT) and it was introduced in Cuba, in the F5 generation, in 2010. Selection in Cuba began in November 2010 from individual plants with desirable agronomic characteristics and subsequent evaluation in regional yield trials. ‘Coral 10’ has red colored grain, is of medium cycle (81 days), resistant to common mosaic virus (BCMV) and bean yellow gold (BGYMV), common bean bacteriosis (*Xanthomonas axonopodis* p.v. *phaseoli*), intermediate to rust (*Uromyces appendiculatus*) and has shown a high and stable yield potential.

Key words: diseases, genotypes, yield, phytopathogens, resistance.

RESUMEN: El objetivo de este trabajo es presentar el nuevo cultivar de frijol (*Phaseolus vulgaris* L.), ‘Coral 10’. El origen de este cultivar fue una selección de la línea SCR 5, que se logró por hibridación entre NCB226 x RCB591/-MC-2C-MC-11C-MC, en el Centro Internacional de Agricultura Tropical (CIAT) y fue introducida en Cuba en la generación F5, en 2010. La selección en Cuba comenzó en noviembre de 2010, a partir de plantas individuales con características agronómicas deseables y la posterior evaluación en ensayos regionales de rendimiento. ‘Coral 10’ posee grano de color rojo, es de ciclo medio (81 días), resistente al virus del mosaico común (BCMV) y dorado amarillo del frijol (BGYMV), Bacteriosis común del frijol (*Xanthomonas axonopodis* pv. *phaseoli*), intermedio ante roya (*Uromyces appendiculatus*) y ha mostrado un alto y estable potencial de rendimiento.

Palabras clave: enfermedades, genotipos, rendimiento, patógenos, resistencia.

INTRODUCTION

The common bean (*Phaseolus vulgaris* L.) is the most important species for human consumption among the leguminous plants, due to its high nutritional value and the

fact that it is part of the daily diet of American continent inhabitants. It is a crop of great importance in Cuba, where it is part of the typical dishes. However, the volumes produced on the island do not meet the demand, making it necessary to implement strategies to increase yields.

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Obtaining new cultivars adapted to the agroclimatic conditions plays a crucial role. The objective of this work is to present the new bean cultivar 'Coral 10'.

METHOD OF OBTAINING

The cultivar 'Coral 10' was obtained from the selection of the SCR 5 line. This line was achieved through the conventional method of hybridization between NCB226 x RCB591/-MC-2C-MC-11C-MC. It was introduced in Cuba, in the F5 generation of the breeding program of the International Center for Tropical Agriculture (CIAT). Subsequently, elite avocados were selected, multiplied and evaluated in regional yield trials. 'Coral 10' was one of the outstanding lines due to its adaptability and high yield potential (Table 1, Figure 1).



Figure 1. Representative image of 'Coral 10' behavior in the field, shape of the pod and its grains

CULTIVAR DESCRIPTION

Table 1. Common characteristics of the 'Coral 10' cultivar

Days to emergence: 3-5 days	Pod color at time of harvest: cream
Cotyledon color: green	Pod profile: medium curved
Hypocotyl color: green	Type of pod apex: pointed
Days to anthesis: 30	Number of pods per plant: 22-30
Days to flowering: 38	Number of seeds per pod: 5-7
Wing color: white	Primary seed color: reddish brown
Color of banner blade: White	Reaction to bean yellow gold mosaic virus: 2-3
Stem growth habit: III	Reaction to common Bacteriosis: 2-4
Main stem length: 88 cm	Reaction to rust: 4
Main stem color: Green	Reaction to root pathogens: 2
Days to physiological maturity: 67	100-seed mass: 28.9
Days to harvest: 82	Potential yield: 2.8 t ha ⁻¹
Pod length: 11 cm	