

Photo: Luadir Gasparotto



BRS Conquista: New Banana Cultivar Resistant to Black Sigatoka

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The black sigatoka, disease caused by the fungus *Mycosphaerella fijiensis*, is the main factor of reduced productivity at banana plantations in humid tropical regions of the world.

In Brazil, the disease was detected for the first time in 1998, in the Amazonas State, in the border region with Peru and Colombia, since then it has caused losses of up to 100% in the yield of cultivars traditionally grown at the state – such as Prata Comum and Maçã – and up to 80% in the yield of D'Angola and Terra plantains, locally known as Pacovan and Pacovi bananas, respectively.

In addition, the cultivar is resistant to panama disease, which is caused by *Fusarium oxysporum* f.sp. *cubense*, fungus soil inhabitant, which produces chlamydospores – structures that allow them to survive in the soil for up to 50 years – even in the lack of susceptible bananas, leading to losses proportional to the number of attacked plants, since it causes wilting in adult plants by the period of emission of the bunches.

Considering the culture's longevity and the aggressiveness of these pathogens, the most viable form under the points of view economical, socioenvironmental and sustainable to control the main diseases of banana is the use of productive

cultivars, and especially carriers stable resistance. Considering this approach, the Embrapa Western Amazon, concerned mainly with small and medium producers has, since 1998, assessed and selected banana cultivars that have multiple resistances to main diseases of the culture and good economics and agronomics characteristics.

Based on the number of viable leaves and severity of black sigatoka in the leaf number 10 at the period of flowering, as well as the resistance to panama disease assessed by cultivation in a soil naturally infested by *F. oxysporum* f.sp. *cubense* for four consecutive production cycles and also considering the agronomic and commercial characteristics, was selected a banana cultivar, which was registered at the Ministry of Agriculture, Livestock and Supply under the name BRS Conquista.

The BRS Conquista's cultivar belongs to the genomics group AAB, cultural subgroup Conquista. It was achieved from the natural mutation of a plant's population from the Thap Maeo grown in the Experimental Station of Embrapa Western Amazon in Manaus, Amazonas State. In addition to resistance to black sigatoka, panama disease and yellow sigatoka, BRS Conquista has high productivity, reaching 48 tons ha⁻¹ year⁻¹.

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The mature fruits have bark pale yellow, cream colored pulp, good balance between sugars and acids and pleasant aroma, and above all very striking, high yield and high ratio pulp/bark.

Regarding the commercial characteristics, the fruits of BRS Conquista received approval by consumers in supermarkets in the city of Campinas in São Paulo State, as well as by the marketers in Central Supply (CEAGESP) in São Paulo, consumers and producers of Presidente Figueiredo – Amazonas State, Cáceres – Mato Grosso State and Jales – São Paulo State.

For their agronomic, organoleptic and commercial characteristics, and especially the resistance to main diseases of banana, the BRS Conquista is being recommended for planting by farmers and certainly participates significantly in the banana agribusiness in Brazil.

Other demonstration and checking units have been installed in Andirá-Paraná State, Registro – São Paulo State, Rosário do Oeste – Mato Grosso State, Corupá – Santa Catarina State, Janaúba – Minas Gerais State and Palmas – Tocantins State. The results at the end of the assessing period, confirmed the maintenance of resistance to black sigatoka and qualities such as appearance, color, smell and taste.

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Plants BRS Conquista in the first production cycle.



Photos: Murilo Arruda

Bunches of bananas BRS Conquista cultivar.

Main characteristics of the BRS Conquista cultivar

Nº of viable leaves at flowering	13-15
Nº of viable leaves at harvest	8-9
Average weight of the bunch	29 kg
Average number of hands bunch ⁻¹	13
Average weight of hand	2,25 kg
Average number of fruits bunch ⁻¹	326
Production ha ⁻¹ year ⁻¹	48 t
Resistance fruit dropping	High
Pseudostem staining	light green
Pseudostem stains	absent
Leaves staining (petiole and blade leaf)	light green
Genomic group	AAB
Cultural subgroup	Conquista
Black sigatoka	resistant
Panama disease	resistant
Yellow Sigatoka	resistant
Moko of the banana	susceptible
Nematodes	tolerant

*Density of 1,666 plants ha⁻¹.

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