



"UCR 55" variedad de frijol común mesoamericano de grano negro [

2022

text (article)

Analítica

Phosphorus (P) deficiency is considered one of the major constraints for common bean (*Phaseolus vulgaris* L.) production, in particular across the tropics. Identification and use of tolerant cultivars are essential for reducing production costs and farmers' dependence on fertilizers to overcome phosphorus deficiencies. Objective. To describe the process of development and the agronomic characteristics of cultivar UCR 55. Materials and methods. This cultivar was developed from the NAB 44 // ROS 24 / G 13689 cross made at Centro Internacional de Agricultura Tropical in Colombia. It was evaluated from 1993 to 2000, by the Universidad de Costa Rica and the Ministerio de Agricultura y Ganadería. The agronomic performance and the traits of UCR 55 were determined through 6 nurseries, 21 trials, 7 validation plots and 5 commercial plots, carried out at 15 locations in Costa Rica. Results. UCR 55 is a dull black-seeded cultivar, with a mean 100-seed weight of 19.4 g. Under experimental conditions in andisol soil, it yielded more than 1200 kg.ha⁻¹ without phosphorus addition. The yield of UCR 55 in the validation phase was 1336 compared to 1000 kg.ha⁻¹ for the commercial check Guaymí. In addition, this cultivar yielded up to 2345 kg.ha⁻¹ in volcanic soils during validation. UCR 55 has an erect architecture (type II), resistance (value ≤3) to *Colletotrichum lindemuthianum* and intermediate resistance (value ≤6) to *Pseudocercospora griseola* and *Thanatephorus cucumeris*. Conclusions. The adaptation to low P soils (<10 ppm) and its resistance to *C. lindemuthianum*, UCR 55 is a cultivar suitable for common bean production in areas over 1000 masl in Costa Rica

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Editorial: 2022

Tipo Audiovisual: Andisol antracnosis baja fertilidad Phaseolus vulgaris L Andisol anthracnose low fertility Phaseolus vulgaris L

Documento fuente: Agronomía costarricense: Revista de ciencias agrícolas, ISSN 0377-9424, Vol. 46, N°. 1, 2022, pags. 77-94

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Lengua: Spanish

Enlace a fuente de información: Agronomía costarricense: Revista de ciencias agrícolas, ISSN 0377-9424, Vol. 46, N°. 1, 2022, pags. 77-94

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