

AGROSYM

BOOK OF ABSTRACTS



*XV International Scientific Agriculture Symposium
"Agrosym 2024"
Jahorina, October 10-13, 2024*

AgroSym
2024

AGRO 2024
sym

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Impressum

XV International Scientific Agriculture Symposium „AGROSYM 2024“

Book of Abstracts Published by

University of East Sarajevo, Faculty of Agriculture, Republic of Srpska, Bosnia
University of Belgrade, Faculty of Agriculture, Serbia
Mediterranean Agronomic Institute of Bari (CIHEAM - IAMB) Italy

International Society of Environment and Rural Development, Japan
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Faculty of Agriculture, University of Novi Sad, Serbia
Institute for Animal Science, Ss. Cyril and Methodius University in Skopje, North Macedonia
Serbian Academy of Engineering Sciences, Serbia
Balkan Scientific Association of Agricultural Economics, Serbia
Institute of Agricultural Economics, Serbia

Editor in Chief

Dusan Kovacevic

Technical editors

Sinisa Berjan
Milan Jugovic
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Website:

<http://agrosym.ues.rs.ba>

CIP - Каталогизација у публикацији
Народна и универзитетска библиотека
Републике Српске, Бања Лука

631(048.3)(0.034.4)

INTERNATIONAL Scientific Agricultural Symposium "Agrosym 2024" (15 ; Jahorina)
Book of Abstracts [Електронски извор] / XV International Scientific Agriculture
Symposium "Agrosym 2024", Jahorina, October 10 - 13, 2024 ; [editor in chief Dušan
Kovačević]. - East Sarajevo =Istočno Sarajevo : Faculty of Agriculture =Poljoprivredni
fakultet, 2024. - 1 USB флеш меморија ; 1 x 2 x 7 cm

Системски захтеви: Нису наведени. - Насл. са насл. екрана. - Регистар.

ISBN 978-99976-816-5-2

COBISS.RS-ID 141522433

SELECTION CRITERIA OF INTEREST AND PARTICIPATORY VARIETAL SELECTION OF BAMBARA GROUNDNUT IN BURKINA FASO

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Abstract

Bambara groundnut [*Vigna subterranea* (L.) Verdc] is one of the oldest legume crops in Africa. It is a neglected and underutilized species that has recently aroused great interest because of its high nutritional value, tolerance to drought and poor soils, and resistance to diseases and pests. Despite varietal improvement efforts, the lack of varieties adapted to the needs of value chain actors remains a major constraint to Bambara groundnut (BGN) production in Africa. Through participatory selection, this study investigates selection criteria of interest for BGN value chain actors in Burkina Faso and identifies a set of landraces according to actors' preferences. The study was carried out using 20 traditional landraces and 30 actors (farmers, processors, consumers, agriculture extension agents, breeders) were involved. First, through individual semi-structured interviews, selection criteria of interest were identified and scores were assigned to them. Then, focus group discussions were organized to investigate group criteria and to support and validate the information recorded from individual interviews. The varietal selection was carried out by choosing three landraces per participant. Finally, landraces were described using agro-morphological traits. Data analysis was performed using Excel, GenStat and R software. Respondents were fairly gender-balanced (55% male and 45% female) and mostly young. Results showed that seed colour, seed size, cultural value, market value, seed taste, storage ability, seed cooking duration and yield were the main selection criteria of interest; but their importance varies depending on actors and gender. Fourteen landraces were selected. Although preferences for landraces vary significantly depending on actors and gender, two were identified as more suitable landraces for all of them. They were characterized by large or medium seed size, short cycle, high pod number and cream-colored seed. The selected landraces can be used for disseminating in Bambara groundnut production regions and future varietal improvement.

Keywords: *Food security, nutrition, NUS, breeding, SUSTLIVES.*