

The Potential of Some Underutilized Plants for Food and Nutrition Security in Benishangul-Gumuz Regional State of Ethiopia

¹Mr. Ebisa Olika Keyata, ²Dr. Yetenayet B. Tola, ³Prof. Geremew Bultosa, ²Dr. Sirawdink Fikreyesus Forsido and ⁴Mr. Assefa Gidesa

¹*Department of Food Science and Nutrition, Wollega University, P.O. Box 38, Shambu, Ethiopia*

²*Department of Post-Harvest Management, Jimma University College of Agriculture and Veterinary Medicine, P.O. Box: 307, Jimma, Ethiopia*

³*Department of Food Science and Technology, Botswana University of Agriculture and Natural Resources, Private Bag 0027, Gaborone, Botswana*

⁴*Ethiopian Agricultural Research Institute, Assosa Agricultural Research center, P.O.Box: 265, Assosa, Ethiopia*

Abstract

In Ethiopia, particularly in the Benishangul-Gumuz region, there are numerous underutilized plants like figl (*Raphanus sativus*), girgir (*Eruca sativa*) and karkade (*Hibiscus sabdariffa*) which are cultivated and consumed only by the local communities. However, information on production practices, postharvest handling, and utilization trends of these plants is limited. Given this, production, handling and utilization trends of figl, girgir and karkade in Benshangul-Gumuz region of Ethiopia were assessed. A cross-sectional household survey was used to collect primary data from 274 producers and 30 users using a semi-structured questionnaire. The data were analyzed using SPSS (Version 20.0) software package. The results showed that, about 46% of farmers produce figl and girgir for food, medicine, and income generation. More than half (55%) of the farmers produce karkade for beverage and medicine. About 93% of the respondents showed that, edible parts of figl and girgir could attain commercial maturity within 15-35 days whereas, calyces of karkade takes 121-150 days (from 59% respondents). All the farmers (100%) consumed leaves and roots of figl and leaves of girgir as salads while 84.31% of them used dried calyces of karkade for beverage. About 94% of the farmers allocated less than 0.25 hectares of land for production of figl and girgir while 81% of them allocated this amount of land for production of karkade. The majority (80%) of the farmers are not getting extension service for production and 53% of them lament that there is no market linkage for the crops. Figl and girgir play significant roles in mitigating food insecurity because they mature in a short time, could be harvested soon; have high yield potential, and they have ability to grow in marginal soils. Karkade calyx

extract has potential for use as a natural colorant for food industries. However, land allocation, extension support and market linkages are poor. Therefore, stakeholders at different levels should take part in increasing production, handling, utilization and commercialization opportunities of these plants.

Keywords: Figl (*Raphanus sativus* L), Girgir (*Eruca sativa* L), Karkade (*Hibiscus sabdariffa*L.), Karkade calyx, Postharvest handling

Acknowledgments: Authors acknowledge Jimma University, College of Agriculture and Veterinary Medicine (JUCAVM) for financial support.