Collection of genetic resources of selected traditional African vegetables in agroecological zones of Benin

A.M. Salaou[1], N. Soulemane[1], E.B. Sossou[1], G. Bodjrenou[1], H. Nouletope[1], N. Akita[1], C. Korogone[1], M. Vigninou[1], C.A.O. Adje[1], Pamela Afokpe[1], N.V. Fassinou-Hotegni[1], S. N'Danikou[1,2], and E.G. Achigan-Dako[1*]

[1] Laboratory of Genetics, Horticulture and Seed Science, Faculty of Agronomic Sciences, University of Abomey-Calavi, 01 BP 526 Tri Postal, Cotonou, Republic of Benin.

[2] World Vegetable Center

*Corresponding email address: e.adako@gmail.com

Abstract

Traditional African vegetables contribute to the reduction of food and nutrition insecurity and strengthen of human health in urban and rural communities in Africa. They occupy a prominent place in people's livelihoods as food, medicine and source of income. However, this diversity needs to be conserved, made available to users and improved to avoid any loss of variability within and among these species so as to save them for future generations. In this perspective, the Laboratory of Genetics, Biotechnology and Seed Science in agreement with the World Vegetable Center organized a germplasm collection of 20 traditional African vegetable crops and wild relatives in 24 districts covering all the eight agroecological zones of Benin. Passport data were recorded for each collected accession. This activity generated a total of 1,479 accessions for 19 species that are currently stored at the genebank unit of the laboratory. *Abelmoschus esculentus*, *Amaranthus cruentus*, *Corchorus olitorius*, *Solanum macrocarpon* and *Lagenaria siceraria* were the top five species collected. Around 73% of seeds providers used previous harvest seeds. Moreover, the collected species are all used by local communities for multiple purposes; the use as food being common to all of the species. Other uses include for income generation, medicines, forage, arts, rituals and firewood. This collection provides insights into the existing variability within traditional African vegetables and opens the doors for more investigations and improvement of the targeted species.

Keywords: Underutilized crops, germplasm, variability, utilization, improvement.