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## Trends and Constraints in the Utilisation of African Nightshade (*Solanum nigrum* complex) in Tanzania

FRANK SANGIJA, HAIKAEL MARTIN, ATHANASIA MATEMU, MARYNURCE KAZOSI

*Nelson Mandela African Institution of Science and Technology, Food and Nutritional Sciences, Tanzania*

### Abstract

African nightshade (ANS, *Solanum nigrum* complex) is among the most widely distributed and consumed indigenous vegetables in Tanzania. Several challenges hamper the utilization of ANS. This study sought to assess trends and constraints to ANS utilization in Kilimanjaro and Morogoro regions, Tanzania. About 627 farmers participated in the interview. Both qualitative and quantitative methods were employed to collect information on ANS production, processing, and postharvest handling. The results showed that 72.1 % of farmers grow different ANS species, with *Solanum scabrum* being vastly cultivated. Also, 79.4% of ANS farmers use irrigation, handheld hoe (97.6 %) use pesticides (70.7 %), and 64.8 % use fertiliser in production. African nightshade is mainly used as food (97.9 %), animal feed (41.3 %), and medicine (38 %). On average, only 5 % of ANS sales contributed to family income. Findings show that main constraints to ANS utilisation include; pests and diseases (92.9 %), lack of knowledge (58 %), shortages fertiliser (51 %), shortages pesticides (50 %), inadequate means of transport (50.4%), lack of extension services (48%), improper postharvest handling (41.4 %) and inadequate storage facilities (34%). Postharvest losses accounted for 78.4 % loss of ANS. Mitigation measures were; harvesting in small quantities (54.5 %) and instant selling (61.9 %) of fresh ANS. There was minimal value addition on ANS, e.g., drying (5.3 %) and fermentation (1.1 %). Moreover, boiling (63.0 %) and frying (45.4 %) and (98.9 %) were the typical methods of cooking ANS. More emphasis should be placed on good agricultural practices, providing knowledge to farmers, and supporting inputs such as pesticides, fertilisers, and quality seeds. Furthermore, knowledge on the processing and preservation of ANS should be given to improve utilization, reducing losses, and ensuring ANS availability. Also, research should focus on breeding local cultivar, which is resistant to pests and diseases.

**Keywords:** African nightshade, cultivation, preservation, postharvest handling, processing, *Solanum nigrum* complex, utilisation