Research and Development of Traditional Vegetables in Zimbabwe: A Review Paper

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Abstract

The role of traditional vegetables in food and nutrition security of both rural and urban populations has gained significant prominence in the last three decades. In response interest has grown among various players including national research and extension services, non-governmental organisations and tertiary institutions for research and development,t to promote production and utilisation. Research on properties and uses of traditional vegetables in Zimbabwe exists but is not widely disseminated. For instance, the Horticulture Research Institute conducted research on *Cleome gynandra*, *Amaranthus* sp and *Brassica carinata and Brassica juncea* focusing on fertiliser requirements and harvesting techniques with an aim to improve productivity. Unfortunately this work and similar research from other institutions has been difficult to access, mostly due to uncoordinated management of information.. With this in mind this paper reviews research work and related documentation on traditional vegetables. A desk study was commissioned and the study was delimitated to research on traditional vegetables conducted in Zimbabwe over the past 3 decades with an aim to advance future research and development in traditional vegetables, and to promote the value chain for improved food and nutrition security.

Key words.:
Traditional vegetables; food and nutrition security; research and development, institutions

Introduction

The Zimbabwean, country report (DR&SS, 2009) on the state of plant genetic resources for food and agriculture recognised about 50 types of traditional vegetables. Of these mostly consumed for nutritive values include *Vigna unguiculata* (nyemba), Cleome gynandra (nyevhe), *Cucurbits* (muboora) and *Amaranthus sp* (mowa). With increased interest in utilization of traditional vegetables the need for research and development in the same area has also increased over the years., (Shippers, 2000) .

Production and role of indigenous vegetables has been studied by a number scientist from national research institutes and universities in and outside Zimbabwe, However , the information is not readily available, in a single search.

The purpose of this review was to present specific research areas and trends in the research of traditional vegetables

Expected outcome is increased research and development in traditional vegetables for improved food and nutrition security, In addition, this mini review will create a foundation for advocacy, and for advancing research and development in traditional/indigenous vegetables., which have cultural and economic importance, for local livelihoods. www.actahort.org?books)

Methodology

A semi systematic approach to literature review was adopted according to Snyder (2019), to uncover areas that have been researched upon, in a single publication for easy references.

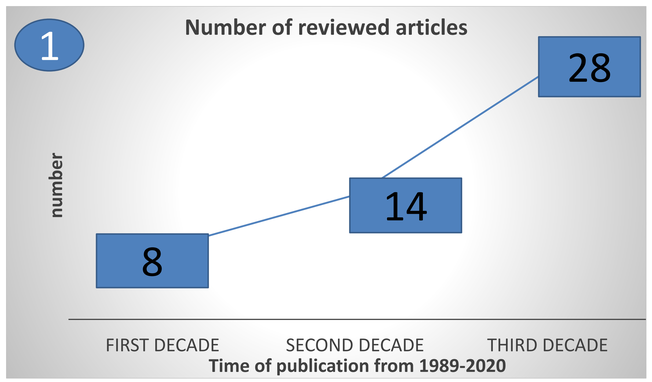
The review employed a qualitative research approach in which articles from World Wide Web, from books and journals were downloaded and reviewed and coded according to emerging themes., over 3 periods (1) before 2000 (2) 2001-2010 (3) 2011-2020

Search words included traditional / indigenous vegetables in Zimbabwe; also names of main traditional vegetables

Thematic data analysis was used supported by descriptive analysis of frequencies from Statistical Product and Service Solution (SPSS) version 20.

Results

1



2 **Ranking of most studied types of vegetables**

	Number of articles mentioning	Rank
Cleome gynandra	16	1
Corchorus sp	7	2
Cucumis/cucubits	7	2
Vigna unguiculata	5	3
Amaranthus	4	4
Bidens pilosa	4	4
Solanum sp	2	5
Wild mushroom	2	5
Brassica sp	1	6
Moringa sp	1	6

3 **Trends in areas of study over three decades**

Thematic Area %	Period mostly studies		
	Decade 1	Decade 2	Decade 3
Utilisation (16%)			
Production (16%)			
Health/medicinal (7%)			
Characterisation and biodiversity (21%)			
Food and nutrition (37%			
Income and marketing (10)			
Socio-cultural (4)			

4 **Map showing provinces in Zimbabwe**

Discussion

50 Articles were reviewed. The steady increase in publications could be attributed to the renewed interest in research and development of traditional vegetables across Africa, (Shippers, 2000)

Widely researched upon vegetables include *Cleome gynandra; Corchorus sp; Cucumis and circubits.* , this could be attributed to the importance and availability of these traditional vegetables in the Zimbabwean culture.

The focus of research has shifted from initial characterisation and biodiversity type of studies to a more diverse area of study involving various disciplines including socio-cultural issues e.g studies on traditional vegetables and life expectancy ; traditional vegetables, and culture and religion.

Mapping of site location of various traditional vegetables was done (Kamumvuri, 2004) , and this review creates a platform for mapping research sites on specific themes and traditional vegetables throughout Zimbabwe

Reviewed articles show limited coverage of studies outside research institutes in Zimbabwe. It seems most studies were carried out in 3 provinces out of 8: Midlands, Masvingo and Manicaland provinces. This could be related to the ethnicity of authors amongst other factors that need further interrogation

Conclusions

Much has already been studied in Zimbabwe, but lack of consistence and persistence in a particular theme and unsystematic knowledge and information management, (KIM) at various levels are of major concern.. KM of existing information is needed. .

Multidisciplinary collaborative research and development teams should be encouraged.

Mapping of existing initiatives and production of a directory of research and development scientists and related thematic areas of research is recommended

Advocacy for policy support in traditional vegetable value chains should be prioritized

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