

Centring the peripherised systems: Zimbabwean indigenous knowledge systems for food security

by

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Abstract

In spite of the abundance of large tracks of fertile land, Zimbabwe still finds itself faced with acute food shortages and, subsequently, among the nations that needs food relief from interventions such as the World Food Programmes. Initiatives to ensure food security have been put in place but the questions that remain worrisome are: Are the food security initiatives incompatible within the realities in Zimbabwe? Whose initiatives are the food security innovations championing? Whose life philosophy is giving impetus to the Zimbabwean food security innovation drive? What is apparent here is that initiatives to completely insure food stability and poverty alleviation in Zimbabwe are not completely hitting the target as in most cases the tools that are used to achieve this goal are usually borrowed ones. It is, thus, against this background that this paper attempts to interrogate the Zimbabwean local systems in search for solutions to food security. The assumption is that initiatives that are devoid of the input from a society's philosophy of life lack the concrete base and the humus that is intended to nourish and nurture it. For how do we explain a situation where in spite of the abundance of rich natural resources, large tracks of land, Zimbabwe is being found on the peripheries of the global food security? It is the aim of this paper to explore the area of indigenous language systems, in the case, the indigenous conflict resolution systems, and their contribution to conflict resolution, peace building, societal reconciliation which are essential requisites to economic growth and development.

Definition of terms

Food security implies a situation where all people at all times have access to nutritionally adequate food and safe water. The World Food Summit (WFS) of 1996 viewed food security in the context of access to safe and nutritious food. On the other hand the World Forum on food and sovereignty of 2001 focussed the concept of food security on people's rights to define their own policies and strategies for sustainable production, distribution and consumption of food. However, it has to be noted that a range of interrelated factors determine whether food security is achieved. For the World Food Forum (2001) the four key factors that must be simultaneously present for food security to be protected are 1) availability of food, 2) access to the food, 3) stability of supplies, and 4) utilisation of food (dietary needs of the individuals must be met).

Introduction

The dominant model of development in most African countries has been based on knowledge generated in laboratories, research stations, and Universities. This research in summary, anchors the indigenous knowledge systems as an integral part of food security and promotion and utilisation of local production systems. The paper highlights the point that local survival strategies had (and still have) the capacity to renew themselves through the innovativeness of the people in their unique ecologies as well as through their interaction with other social

systems, and ultimately contribute to the realisation of food security in Zimbabwe. The crux of the argument is that the pool of knowledge and expertise on food security, in the traditional Zimbabwean context, was driven and given impetus by the way of life of the local people. It emphasises that Zimbabwean local knowledge for food security is part of a plethora of time-tested survival strategies which took cognisance of and depended on symbiotic relationship between food security and locally available resources. The colonial system set up a scene for the establishment of an economic relationship where Zimbabwe, like most African states, occupied a second class partner status. This relationship inhibited most African nations from advancing their own science and technology and thus allowing Europeans, through their control of African economies, a chance to widen the technological and industrial gap between Africa and Europe. With this contact came the loss of confidence and faith in the local food varieties, food security systems as well as the African wisdom in general and, thus, resulted in them looking down upon their own scientific food security strategies.

The paper tries to prove that the indigenous people had their own scientific mechanisms of ensuring a reliable source of food throughout the years. Examples of time tested strategies such as extending the shelf-lives of different types of seasonal and perishable foods are given. The use of storage facilities that are

strategically designed to promote and safeguard food security have also been highlighted. Suggestions to make alternative foods accessible on the market through the improving of indigenous technologies to refine and process traditional foods are given. The paper suggests that Zimbabwe adopts appropriate institutional changes within the relevant innovation system to allow the acceptance and appreciation of the nutritional or dietary value of the various traditional foods. According to this paper, Zimbabwe has to adopt a paradigm shift in terms of agricultural food security that would emphasise a thrust on promoting the adoption, adaptation and utilisation of traditional knowledge and technologies for food security. It contends that mapping hunger and poverty through exploring the linkages among food security, poverty, environment and trade policies would be a prerequisite.

Statement of the problem

In spite of the abundance of land in Zimbabwe, the country is one of the major beneficiaries of food insecurity interventions.

Background to the study

According to Chiwome in Chiwome, Furusa and Gambahaya (2002) the adoption of foreign structures as well as economic policies has resulted in the weakening of survival strategies of the African communities. As a result they advocate for the harnessing of indigenous knowledge systems in all attempt to improve the "security" of the continent. In the context of this paper, harnessing indigenous systems entails focusing on how to make safe food and water accessible to all members of the society through the use of indigenous knowledge systems. As has already been highlighted, for decades now, the dominant model of development has been based on knowledge generated in laboratories, research stations, and Universities. While these institutions remain extremely important, the presence of indigenous knowledge systems has been greatly undervalued. The objective of this research was to anchor the indigenous knowledge systems as an integral part of food security for the promotion and utilisation of local foods. Surely, food security in Zimbabwe is a growing concern, yet the capacity of indigenous knowledge systems to enhance the food security is often neglected. This paper attempted to explore the potentials of African knowledge and technology with the concomitant need to give them centre stage in order to empower the very communities that give rise to, and largely depend on them. It also sought to identify concrete situations in which traditional African survival strategies were and are still being used to be identified.

Methodology

The study was based on a triangulation methodology. It employed the survey research design complemented by the case study research design.

It surveyed and case studied seventy-five senior citizens from Musana and Domboshava communal areas. Use of survey research design was preferred because it is viewed as one of the most appropriate design for eliciting participants' opinions. In this regard, it enabled us to gather participants' opinions regarding Zimbabwe Knowledge Systems for food security. The citizens were interviewed using focus group of 15 participants. Their responses were transcribed as notes. Focus groups enabled the researchers to gather rich material that assisted in the generation of new theory (Thomas and Nelson 2001). Data were analysed using textual analysis.

Literature Review

According to Chiwome in Chiwome, Furusa and Gambahaya (2002) the adoption of foreign structures as well as economic policies has resulted in the weakening of survival strategies of the African communities. Julian Cunnie (2002) further emphasises the existence of traditional, time-tested food security strategies when she highlighted that Africans have ever practiced mixed or intercropping, agro-forestry, shifting cultivation and other indigenous agricultural management systems which mimic the natural cycle in the natural ecosystems (Matowanyika 1995). For these thinkers, the contact reduced Zimbabwe, and the African continent at large, to a position where it had no choice but to fit into economic and industrial policies of the West. Africa lost all control on the economic sphere and barriers to economic investment were institutionalised. Zimbabweans, like all other nations under colonial rule, had to fit into the consumerist culture which allowed the industrialists to dump their cheaply produced food products onto the African economic market, while at the same time creating a strong and unquenchable craving for Western produced food and food security systems, which made them think of or envisage themselves as a market for the consumption of already finished products not producers and preservers of these same commodities. Hence they found themselves in a position where they consumed more of the products they did not produce and produced more of what they themselves did not consume. Thus, the traditional pool of knowledge and technology for agricultural sustenance that the local communities had built were destroyed in no time. The destruction of the technology, science and industry base subsequently led to the destruction of their initiative in the field of food security.

Research Findings

According to Paul Nyakazeya of the *Zimbabwe Independent*, cited by the Famine Early Warning System Network (Fewsnet 13 January 2011), two million people need food aid and an estimated 2.2 million Zimbabweans are in need of food aid for the year 2011. Also, commenting on the 2010/ 11 agricultural season, the Zimbabwe Vulnerability Assessment Committee (Zim Vac) estimated that 2.17 million people will be food insecure requiring food

assistance in 2011. The same report traces the food insecurity situation back the 2001 period and states that the deficit of consumption requirements in 2010 was over 700 000 tonnes with commercial imports in 2009/10 accounting for 500 000 tonnes. Again, in 2008 about 40% of the population was recognised to be undernourished. According to the Zimbabwe Food Security Issue Paper, in 2002, 486 000 tonnes of food aid was needed to meet food security requirements of 49% of the population. Seventy percent (70%) of the rural population was at risk of famine-induced starvation (WFP 2002). In fact, in 2002, the country was said to be unprepared for the food security disaster since it is said to have exhausted its grain reserves. With limited foreign currency reserves, the country was incapacitated to meet commercial imports that were needed to bail the population out of the quagmire of famine. And hence world food aid became a major source of relief to avert national food security disaster. Inflated or not, the statistics indicated below is enough testimony that there surely has been a registration of a serious and worrisome state of food insecurity in the nation. And one wonders why, in spite of the abundance of large tracks of land as well as the diverse food security interventions, the nation still finds itself among the very poor nations that have to depend on food hand-outs from organisations such as the World Food Programme.

Indigenous agricultural management systems for food security in traditional Zimbabwean society

The senior citizens in the Musana communal lands concurred with Chiwome et al (2001) and Matowanyika (1995) with regards to the role of indigenous knowledge systems in any progressive intervention in Zimbabwe. For them, the indigenous knowledge that was used for ensuring food security demonstrated the people's management of micro-climates, their responsive energy utilisation and effective pest control. The knowledge unveiled ecological sensitive and harmonious modes of cultivation and pastoralism as practiced in the traditional Zimbabwe, modes that were rooted in local knowledge whose main thrust was preserving the precious resources of the natural ecosystem for the good of the then generations as well as their posterity. From interrogating the management systems, it becomes clear that the indigenous farmers were conscious of the acute problems of drought, low and sporadic rainfall and, thus, developed comprehensive systems to counteract that.

The majority of the elderly people emphasised the concept of diversification of sources of food security. Diversification of sources of food, they argued, was critical in the Zimbabwean unwritten food security policy. Under this food security policy, in addition to the large grain crops, small grains played a very significant role in the preservation of any household food security. Furthermore, to the list of the small grain crops, there are tuber crops, which consist of sweet potatoes, cassava, *madumbe*, just to mention a

few. Within this traditional unwritten food security policy, the tubers, and other crops such as groundnuts, roundnuts, *nyemba*, pumpkins, watermelons, sweet reeds, were very critical and it was imperative for every woman to have a portion of land allocated for such crops. What kind of a mother, grandmother, aunt or daughter-in-law would one be without these crops in her piece of land? Because the pieces of land that were earmarked for farming activities were normally small, mixed cropping or intercropping was the mode. Within that same piece of land where the maize crop was planted, there was the bean crop, the pumpkin, the sweet reeds and even the tuber crops. With such a kind of agricultural practice, the soil was kept fertile by the use of various crops that improved the fertility. The different crops could control the acidity or alkalinity of the soils while at the same time injecting the much needed nutrients into the soils to correct the low phosphorus and potassium levels. At the same time, this would control pests hence the need for artificial fertilisers was not a burning issue.

Such kind of an agricultural policy, besides ensuring the production of adequate food, catered for all the dietary needs of the population in a very cost effective manner. This ensured food security within the communities through strategic promotion of other foods to diversify food security sources.

Group discussions revealed that in the traditional Zimbabwean set up people adopted a number of strategies to address both chronic and transitory food insecurity and to lessen the impact of droughts. Local communities had mechanisms for storage and maintenance of strategic grain reserves for household food security and nutrition security hence the construction of granaries- *matura/tsapi* in Shona or *izipala* in Ndebele which were cleaned, smeared with cow-dung before being filled with grain and then latter completely sealed. The sealing itself was very critical and it was informed by a lot of local wisdom on the life cycles of pests and pest control systems. Sealing the granary ensured that no living organism accessed oxygen for respiratory and reproductive purposes. Thus, any pests that would have found their way into the granary were suffocated to death while those in the atmosphere were deprived of any chances to enter the food storage as a result of the sealing process. This way the households ensured that they did not risk losing their stored products through insect damage and ultimately exposing the communities to food insecurity.

Besides, the granary positioning itself ensured that the grain inside was kept free from atmospheric moisture. The granary was built on top of four huge rocks – above the ground and further away from the moisture on the ground. The rocks formed the four pillars on which the store-house stood such that the space underneath became yet another place for ensuring an extension of the shelf-life of some food products such as pumpkins and watermelons. The atmospheric environment underneath the granary

provided a user friendly and inexpensive cold-room that kept the pumpkins and water melons intact for extra months well after their expected seasonal life span. It is this cold-room technology that was used when preserving tubers such as sweet potatoes and other grains such as round-nuts. In some communities ashes collected from fire places were used, probably to prevent the food from being attacked by termites and other pests. Sweet potatoes could be preserved fresh for a very long time in a pit or jute sack filled with ordinary smooth ash. Weevils could be prevented from burrowing all kinds of grain by putting dry gum tree leaves between layers of grain in the sacks or granary. People could continue enjoying the taste of autumn fresh foods if they boiled fresh mealies and ground nuts before drying them. These could then be re-cooked in winter, summer or spring to ensure that people were well nourished. In a way, with the assistance of the indigenous knowledge systems, the traditional African societies managed to cater for the dietary needs of their households for longer than the natural seasons would have allowed them. In situations where the concept of keeping the agricultural products in very cool conditions could not be reliable, drying the products was an option. Among the Ndebele communities, melons could be dried to produce what they call *unkankalu*. Both Shona and Ndebele communities boiled and dried green mealies, dried sweet reeds and many other seasonal food products for consumption when these products were out of season. Green vegetables were dried so that even when there was no water for watering gardens during the dry season, families had their reliable source of the food product.

The researchers, just like the participants found themselves questioning: if the traditional society had all this vast knowledge of preserving food for use during periods of scarcity, if they could cater for all the dietary needs of their population, why has the present Zimbabwean society failed to tap from the wisdom that is displayed in the traditional food security policies? Unfortunately as postulated by M.J. Morris, B.M. Mvumi, W.H. Riwa and T.E. Stathers (2005) there is the perception that knowledge and knowledge generation is exclusively the product of research. It, however, is undoubted that Zimbabwean traditional survival strategies have the capacity to, and have always renewed themselves through the innovativeness of their people as they struggled to survive in their unique ecologies and through interaction with other social systems. Thus, proving that Zimbabwean local knowledge for food security is part of a plethora of time- tested survival strategies which took cognisance of and depended on the relationship between food security and locally available resources. It however, is unfortunate that the spirit of continuous self- renewal, which is the essence of African traditions, was stifled by servitude to colonialism which has in many cases, been perpetuated through neo-colonialism. At independence, Zimbabwe, like most other African

countries, lost the opportunity to draw up their agenda as western trained cadres took up the role of safeguarding western interests through the food security policies that they drafted and prescribed to the nations.

How food security policies have been developed

Since independence, professional civil servants in the Ministry of Lands, Agriculture and Rural Resettlement have been responsible for developing agricultural strategies related to food security. The domain of policy making was for the civil servants. Being products of the colonial system, these civil servants promoted and perpetuated the imperial oriented agricultural policies which took, and still take very little cognisance of the food security needs of the indigenous people while emphasising production of raw materials for the former colonialists' industrial activities in the metropolitan state, hence the promotion of cash crop production. As a result, cotton production increased in the period 1980 - 1990, with 50-55% of the cotton product being supplied by communal farmers. And as the communal farmers diverted their attention to cash crops, food production slackened and the production of other supplementary food varieties that were not recognised on the economic market suffered. The 1990s also witnessed the diversion of large scale farmers from food production to horticulture, that is the production of flowers and other horticulture products; hence, as noted by the Zimbabwe Food security Issue paper (2005), the high and persistent malnutrition levels. However, what is of paramount importance when looking at such kind of agricultural practices thrust is the question of the philosophy that is driving and giving impetus to the policy. Surely a policy that derives its essence from the local unwritten food security policy will adopt strategies that ensure the improvement in the satisfaction of the dietary needs of the population as number one objective of the agricultural and food security policies. Again, an emphasis on the production of cash crops that really can never act as food supplements, is devoid of sensitivity to human dietary needs.

Availability of traditional food on the local commercial market

For purposes of ensuring sustainable food security in Zimbabwe, provision of value added traditional food stuff is imperative. This move would go a long way into commercialising them as well as providing dietary variety to the poor people. The traditional food will go a long way into providing low cost food for the low income earning people. However, the problem is that research initiatives, targeted to develop technologies for the refining and adding value to food stuffs are mostly intended for already commercialised products and never the needs and priorities of the indigenous oriented households. The foods that come in the form of the small agricultural products are relatively inexpensive and affordable for the consumers. Reviving the traditional food security

that catered for diversity in the food accessibility would be of great importance to low income earning sections of the urban populations who, in most cases, find themselves pushed to the peripheries of the food markets as a result of unaffordable prices. The variety introduced will provide low cost food when markets are unaffordable.

Conclusion

Zimbabwe is in the food insecurity position that she finds herself in today because of failure to tap from the indigenous food security strategies. As has already been indicated, this pool of knowledge and expertise on food security, in the traditional Zimbabwean context, was driven and given impetus by the way of life of the local people, responding to the needs of both the people and the natural environment around them. It is these experiences that stimulate and nourish the scientific and technological innovativeness of the very people who are supposed to benefit from it. In a nutshell, harnessing indigenous knowledge systems in finding solutions for food security with a focus on local knowledge and experiences would enable decision-makers to design and implement policies that are based on harmonised and systematised knowledge to promote food security hence developing information and knowledge systems, which in turn strengthen policies, programmes and actions on food security. The paper also explores the degree to which concrete situations in which traditional African survival strategies were and are still being used to be identified.

Way forward

There is need for strategies to make alternative foods accessible on the market through improvement of indigenous technologies to refine and process traditional foods that reduce production costs. The key challenge here is not in devising new food production technologies but in bringing about appropriate institutional change within the relevant innovation system to allow the acceptance and appreciation of the nutritional or dietary value of the various traditional foods:

- There is need for a paradigm shift in terms of agricultural food security that would emphasise a thrust on the promotion, the adoption, adaptation and utilisation of traditional knowledge and technologies for food security.
- There is also need for mapping hunger and poverty through exploring the linkages among food security, poverty, environment and trade policies, harnessing the role of indigenous knowledge systems in finding solutions for food security with

a focus on local knowledge and experiences as the starting point. Mapping hunger and poverty would imply showing how policy outcomes reflect key linkages. This mapping would enable decision-makers to design and implement policies that are based on harmonised and systematised knowledge to promote food security.

- There is also an urgent need to build better connections between food security, poverty, environment and trade. The goals are very simple and involve developing an information and knowledge system, which in turn strengthens policies, programmes and actions on food security.

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