

Agro-Processing as a Value Added Tool to Food Production in Nigeria

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Abstract. A paper on agro processing: adding value to food production in Nigeria highlights food security due to post-harvest losses and how to overcome it. It emphasizes on the need to process and preserve the food and non-food components. The paper is divided into six parts which include introduction, types of agro-processing, adding commercial value to raw or semi-produced food products, popularization of production, challenges in food processing in Nigeria, role of government organizations, recommendations and conclusion. In conclusion, the researchers emphasized that food security can only be achieved by processing, preserving and preventing pests and microbial contamination of food and even agricultural products and recommend the establishment of post-harvest department units.

Keywords: Agro - processing, value added tool, food production and Nigeria

1. Introduction

The current food crises in Nigeria underscore the importance of promoting food production and reducing post-harvest losses as well as vigorously promoting food processing. The lack of enlightened problem solving innovation in the agricultural and agro-industrial sector, and therefore the slow pace of needed technological change, has led to a widespread stagnation and even decline in

both crop yields and diversification of high quality food products.

Many attempts to address the problems of food insecurity in Nigeria have had limited success. Often, the target beneficiaries of projects have been inadequately taken into account in designing the projects or projects were promoted without adequate infrastructure and institutional support where relevant results exist that can be implemented, the private sector often fails to invest in the commercial translation of the results into innovative process or products due in part to lack of information on the economic viability of these innovations or technologies, on associated technical assistance and on the key role of the extension service in implementation process.

Collective efforts to deal with food security are articulated in the programmes such as Fadama I, II and III; Special Programme for Food Security (SPFS) and Agricultural Development Programms (ADPs) to mention but a few. FAO (1996) states that agricultural products are produced by technologies of growing complexity, and they incorporate the results of major research and development efforts as well as increasingly sophisticated individual and collective preferences regarding nutrition, health and the environment. While it is usually possible to establish the phase of

production of raw materials from the processing and transformation of the food and non-food components, the two can exist in an environment of agricultural diversity. Usually, however, the two industries operate completely from each other. Food industries are much more homogeneous and easier to classify than the non-food industries since the farmers' products all have the same end use.

Most preservation techniques, for example, are similar over a whole range of perishable food products whether they are fruit, vegetables, milk, meat or fish. In fact the processing of the more perishable food products is to a large extent for preservation and not necessarily to transform them into more acceptable products (FAO, 1996).

Non-food industries on the other hand are more diverse and their products have a wide variety of end uses. Almost all non-food agricultural products require a high degree of processing. Much more markedly than with the food industries, there is usually a definite sequence of operations leading through various intermediate products before reaching the final product.

2. Potential for Agro-Industry in Nigeria

The potential for agro-industrial development in most developing countries especially Nigeria is related to the relative abundance of agricultural raw materials and low-cost labour. The most suitable industries under such conditions are indeed those that make relatively intensive use of these abundant raw materials and unskilled labour and less-intensive use of presumable scarce capital and skilled labour (Eboh 2002).

Many of the industries that use agricultural raw materials, in fact, have characteristics that make them particularly suitable for the circumstances of Nigeria as a developing country. Where the raw materials present a large proportion of total costs, its ready availability at a reasonable cost of ten off set such disadvantages as a lack of infrastructure or skilled labour. Furthermore, F AO(1996)

affirmed that for many agro-industries, a small plant may be economically efficient, which is another important factor in developing countries where the domestic market is limited by low purchasing power and sometimes by the small size of the market itself.

Various potentials for value added in the processing and manufacturing of major food products in Nigeria have been identified. Such potentials, if well exploited, could serve as a basis for alleviating food insecurity in the country and the entire continent. Adding commercial value to raw or semi-processed food products over decades, with exceptions, profits in the food business have been in the value added processing industry and not in the value of raw material (commodity). (Rand Forum 1995) the price of these raw materials fluctuates according to the law of supply and demand and it is more or less controllable, especially at the producer level. Producers are not marketers, therefore, producing middle men intrude, and without a policy and a level playing field, the producers' loss increase the value of the produce, the only solution lies in value-added processing.

The advantages of processing products at origin beyond those first necessary steps fold, first processing permits the reduction or suppression of imports of the same food produce. Nigeria imports food of various kinds that are used by more or less important strata of the population, a direct function of their purchasing power. The situation, however, is illogical if the raw material originates in the very country that imports the finished product usually at a high premium.

Second, processing creates income by increasing exports to consuming countries, thus easing the import of any scarce staple food exporting processed food instead of the "rawest possible suitable for transportation" permits the exporter to receive as payment for the transformation's value-added on top of the price for the raw material. One attractive factor for the Nigerian food processor is the lower cost of wages, which can both constitute

an opportunity to boost profit and an incentive to dedicate special care and money to quality control and marketing. Third, processing increase food exports to other African countries, thus fulfilling their needs, enhancing intra-African trade, and increasing the continent's autonomy and self-reliance (RAND Forum, 1995).

3. Popularization of Products

To accelerate the development of agro-processing, aggressive promotion of products both in the local and international market is a prerequisite. The following measures may be required:

- Restriction of direct foreign investment to allow selective development of local capacity.
- Regulation of imports and local absorption
- Special tax incentive to enterprises producing and distributing value added products.
- Organizing exhibitions and demonstrations both locally and abroad.
- The government should offer subsidies to the local producers so that the products may be more affordable.

4. Challenges in Food Processing in Nigeria

The problem of diffusion and commercialization of food production and processing technologies has generated considerable interest and therefore, has been the subject of workshops, expert group meeting and seminar in Nigeria and elsewhere. The challenges of food processing in Nigeria are many and complex.

Natural science and technology policies, in so far as they exist in Nigeria, emphasize the supply side of the creative aspect of science and technology in terms of education and training, but the demand side and its linkage with society are hardly mentioned. Perhaps, the most serious problem is that indigenous entrepreneurs generally believe that the best markets for acquiring the relevant technologies are outside

Nigeria (Arene, 2008). Infrastructure, Energy costs and water constraints are the major challenges in agro-processing in Nigeria. Other constraints associated with the slow diffusion of agro-processing in Nigeria include:

- Lack of a package of incentives to professionals, and ultimately become involved in risky ventures such as commercializing indigenous innovations and inventions.
- Poor technical performance of delivery systems and weak technical extension service.
- Lack of an industrial culture and hence the need to create a culture for turning out well-design products that is competitive in the market place.
- Scarcity of skilled personnel.
- Inadequate facilities for engineering, design and manufacturing.
- Lack of an enabling environment with which any inventor or innovator can operate.

5. Role of Governmental Organizations

A good government is concerned about the health of its people because only healthy people can build a nation, reflect the socio-economic status of a nation and reduce government delivery costs. It is possible to have abundant food production and yet be food insecure especially if post-harvest losses are large. To ensure that food products of local industries compete effectively in world trade and to provide quality goods for local consumers, governments should encourage and help local industries go into partnership with international organizations to help improve the quality and safety of their food products (Oniang O, 2002).

The current food production cost is partly due to avoidable losses that occur during storage to reduce food losses, government should establish post-harvest development units with the following objectives:

- To improve the diets of the people by raising the nutritional quality of food through agro-processing.

- To improve the quality of food by enhancing its handling, transportation, processing and storage.
- To increase the income-generating capacity of farmers through adoption of improved grain storage technologies and by facilitating links to markets.
- To introduce mechanization into the processing system using appropriate technology
- To empower small-scale farming communities
- To help rural communities establish agro-industries for income generation and employment.
- To train extension staff in the use of improved post-harvest technologies.
- To ensure the existence of adequate infrastructure through construction and maintenance of roads, communication, power provision and security.
- To provide an enabling environment in which private industry, consumer groups, researchers, NGOs and traders can operate.

6. Recommendations and Conclusion

Nigeria cannot sit back and hope that its people's health can be safe guarded by others. Its markets are being flooded by truly sub-standard goods from elsewhere. Reducing post-harvest losses through agro-processing is of paramount importance if Nigeria is to avoid food shortage. A holistic approach should be advocated as tackling the food chain piece meal only work to create confusion. Research groups and institutions should interact with each other and with rural communities to preserve perishable commodities close to the point of production, there by alleviating unemployment in the rural areas, reducing poverty and micronutrients deficiencies and benefitting women who are largely involved in food processing. The marketing of such products needs to be addressed concurrently. Field staff and new recruits need to be trained in marketing, post-harvest handling, basic agro-processing and agribusiness so that they are able for example to advise farmers on improved storage techniques and processing.

Rural based food processing can create employment and thus reduce poverty and under nutrition in these areas. Women will benefit greatly since they play a dominant role in such activities and have being harshly affected by current economic reforms. Some specific activities could include breeding crops for both yield and good storing qualities. The development of improved drying technologies that are affordable and culturally acceptable and launching an education campaign at the community level that promote ways of preserving different types of food and that emphasizes that cleanliness can provide the cheapest, most effective and least polluting way of preventing pests and microbial contamination of food. Clearly without a credible and save good system food insecurity will continue. Also without much question, agricultural research and technology development institutions, which, are often if well-funded, have a responsibility to ensure that they transfer results from their many years of hard work to the next level of agro-processing.

References

- Are, C. J. (2008): Economic Analysis of Agricultural Development Projects (Planning, Appraisal, Implementation and Evaluation), SNAAP Press Ltd Enugu.
- Eboh, E. C. (1995): Poverty, Population Growth and Environmental Degradation. The Vicious Cycle of Human Misery, Auto-Century Publishing Co. Enugu.
- FAO (1996): Socio-Political and Economic Environment for Food Security. In Technical Background Document/world food summit, Vol. 1 Rome.
- Rand Forum (1995): Source Book on African Food Technology. Nairobi: Rand Forum Press.