



Construction of Functional Storage Facilities to Reduce Spoilage of Food and Improve Income through the Introduction of Improved Storage Technology

TECHNOLOGY DESCRIPTION OF IMPROVED STORAGE

TECHNICAL DESCRIPTION

Preventing post-harvest losses of crops is a challenge for farmers in the tropics, thereby necessitating improved storage technology. Improved storage structures have a higher storage capacity for long term storage of food crops than traditional storage structures. Over the past two decades the need for economic and social analysis in the planning and design of storage interventions has become more widely recognized. This stems from the realization that any improvements in storage will only be attractive to farmers, traders or governments if the perceived benefits substantially outweigh the costs. Technical superiority is generally insufficient and farmers and traders are likely to tolerate quite high storage losses before undertaking complex or expensive changes to their storage systems. Agricultural products cannot be stored indefinitely. You can extend the shelf life of some fresh agricultural products by cooling, but this is expensive. For all crops, the most important thing is that they remain edible during storage. Most fruits and vegetables should also keep their attractive appearance. A wrong colour, wrinkles, etc., make them less attractive to consumers. For each product there are numerous factors that pose a threat to their shelf life. These threats are present not only during storage, but during the whole pipeline from food production to consumption or marketing. Cereals, pepper, potatoes grains, cassava leaves, etc. are very important grains products for storage. Good storage helps ensure household and community food security until the next harvest and commodities for sale can be held back so that farmers can avoid being forced to sell at low prices during the drop in demand that often follows a harvest. While considerable losses can occur in the field, both before and during harvest, the greatest losses usually occur during storage. Therefore, the basic objective of good storage is to create environmental conditions that protect the product and maintain its quality and its quantity, thus reducing product loss and financial loss.

CLIMATE RATIONALE OF THE TECHNOLOGY

The technology contributes to adaptation needs by remedying losses in agricultural crops during the peak of harvest especially during the rainy season; guarantees the availability and low cost of food crops in all seasons. Improved storage is an essential tool that guarantees the availability and low cost of food crops for both the farmer and consumer. It also contribute to poverty reduction and greater livelihood security. Improved Storage Technology enable farms families to store grain and sell their surplus at attractive prices; increase farmer's ability to increase crop production and improve women health .

The technology provides an adaptation strategy for climate change by ensuring feed is available for livestock and seed stock is available in the event of poor harvests due to drought. The establishment of safe storage for seeds and reserves of food and agricultural inputs are used as indicators of adaptive capacity in the agriculture sector.



AMBITION OF IMPROVED STORAGE TECHNOLOGY

SCALE FOR IMPLEMENTATION AND TIME-LINE

It is been planned that by 2027, there will be 3 functional storage facilities constructed in Lofa, Bong, Nimba, Grand Kru, Maryland, Sinoe and Upper Montserrado,

The goal and objective of deploying and diffusing this technology are to meet consumers' needs, and achieve low cost of food crops production. To achieve this, it will require the support and involvement of institutions and individuals such as the Liberian Land Authority, the ministry of Agriculture, ministry Internal Affairs, policy and decision makers, local government authorities, regional agriculture coordinators and extension officers. Other participants include, research and training institutions, Agricultural NGOs, the Civil Society Organizations and bringing gender at center stage of the implementation of the technology.

EXPECTED IMPACTS OF IMPROVED STORAGE TECHNOLOGY

The introduction of this technology will impact the Agriculture sector and the Liberian economy as follows;

- Reduce losses in agricultural crops during the peak of harvest especially during the rainy season.
- Guarantees the availability and low cost of food crops in all seasons.
- Increase farmer's ability to increase crop production and take health of women and income into consideration.
- It will create additional jobs especially for those involved in storage systems installation, operations and maintenance.
- Investments opportunities exist in manufacturing and supply of storage systems components and spare parts.
- Stored food products will avoid the consumption of contaminated food stuff and protect humans health.

POLICY ACTIONS FOR IMPROVED STORAGE TECHNOLOGY IMPLEMENTATION

EXISTING POLICIES IN RELATION TO THE TECHNOLOGY

- Food and Agriculture Policy and Strategy 2008
- National Food Security and Nutrition Strategy 2009
- Liberia Agriculture Sector Investment Program 2009



- The New Policy for Agricultural Advisory Services of 2009

PROPOSED POLICIES TO ENHANCE TECHNOLOGY IMPLEMENTATION

- Public-private partnership in research and development of the technology
- Incorporate safeguards that disallowed gender-based offences and abuse in the work setting

COSTS RELATED TO THE IMPLEMENTATION OF POLICIES

The financial and technical supports require for the implementation of the proposed policies is **USD10, 000.00**

USEFUL INFORMATION

CONTACT DETAILS

Mr. John Forkpa Kannah
Department of General Forestry
College of Agriculture & Forestry
University of Liberia, Monrovia, Liberia
+231776375293/+231880544222
Email: forkpajr2013@gmail.com / kannahjf@edu.ul.lr

LINKS TO TNA REPORTS

<https://tech-action.unepdtu.org/>