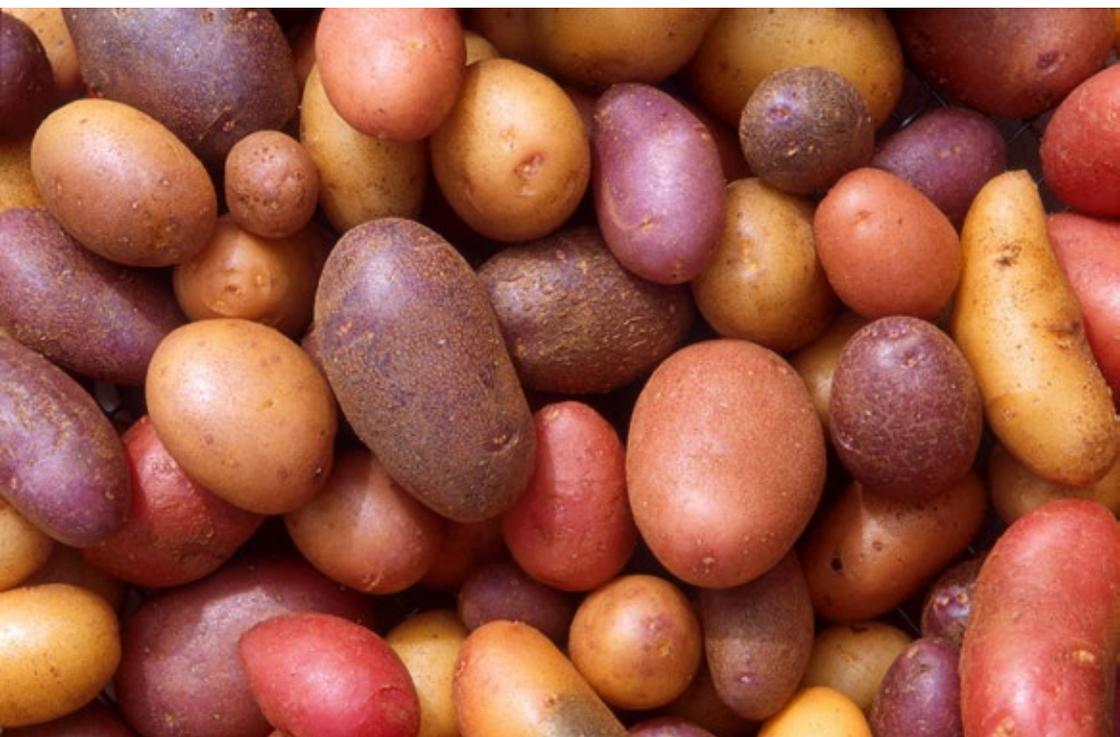




Policy Brief

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Strengthening the Seed Potato industry in Malawi



1.1 Overview potato industry

Potato (*Solanum tuberosum* L.) is the fourth most important food crop in the world, after wheat, maize, and rice. The crop plays a significant role in human nutrition and is number one non-cereal crop. In Malawi, the market for potato is expanding rapidly today because of urbanization. This growing domestic market presents a valuable livelihood opportunity for smallholder farmers besides benefiting vulnerable low-income consumers.

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Despite the growing market, smallholder farmers fail to realize the potential benefits from the product because of low quantities and quality of potato. The major constraints of potato production in Malawi is the inadequate supply of reasonably priced, farmer-preferred, quality seeds, inadequacies of transport and cold storage facilities.

1.2. Overview of the potato seed industry

Where are we?

Seed is a critical input in potato cultivation and accounts for about 40-50% of the total cost of cultivation. Thus, the production of high-grade basic seed remains a key factor in the development of a competitive potato seed industry in Malawi. Currently, Malawi has two Seed Potato Production Systems and these are: the informal system where farmers select seed from their freshly

harvested crop for and keep for planting in the next season. Another system is the formal system. With financial support from Irish Aid through International Potato Center (CIP) and RLEEP through Bunda College Consortium, the formal system is being developed and it consists of production of Seed Potato through Tissue Culture - Screen House and then Field Multiplication.

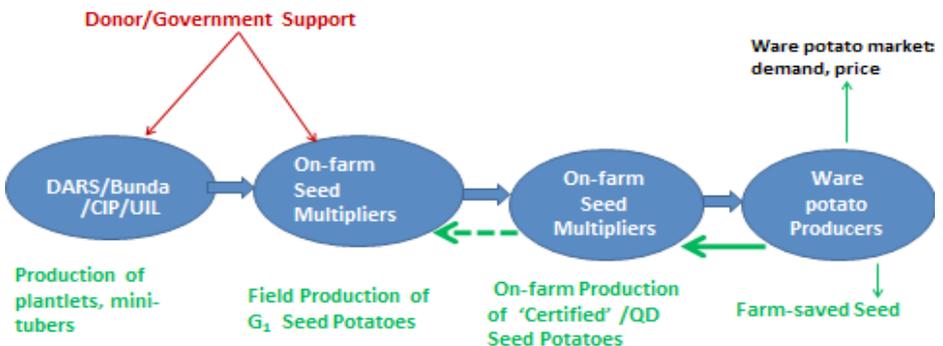
The Formal System also involves Seed Quality Control and Certification Department of Agricultural Research Services (DARS) Seed Services and is being developed using the Public-Private Partnerships (DARS, Universal Industries Limited, Jacaranda Ltd, Bunda College, CIP, as well as some farmers clubs). Since 2007, interventions to improve the quality of on-farm saved seed by farmers using the Positive and negative seed selection techniques have been implemented in 4 Districts (Dedza, Ntcheu, Mchinji and Ntchisi) with financial support from Irish Aid through CIP.

1.3 What are the gaps?

Despite the knowledge that low quality seed potato negatively affects productivity, the demand for improved and high quality seed is still low. The common practice among the farmers has been use of potatoes from the previous harvest as seed potatoes.

Another gap in the potato seed sector is lack of standard and sufficient seed supply and distribution system. The informal seed supply system still dominates the seed industry. The major problems emanating from the practice of informal seed system are poor seed health (accumulation of seed borne diseases),

Schematic Flow of Seed



unsuitable physiological age, poor genetic quality, impurity (varietal mix-up), and physically damaged and inappropriate seed size leading to low yield and poor quality. The crop raised through diseased seed does not respond adequately to application of nutrients, plant protection measures and irrigation.

The development of the formal seed system is still facing some hiccups due to high cost of capital investment especially for seed stores and irrigation facilities for winter crop. Without adequate irrigation facilities, seed producers fail to operate throughout the year resulting in shortage of seed supply. On the other hand, without appropriate storage facilities and in the absence of guaranteed market, private sector is reluctant to invest in production of large volumes of quality seed. Apart from storage facilities another challenge affecting the formal sector development is the delayed acquisition of chemicals due to especially for biotechnology lab at DARs for indexing of potato and bacterial wilt assessment. The formal sector is also highly affected by the electricity supply outages (blackouts) that affect development of plantlets in tissue culture laboratories and screen houses.

Although there is low demand for the improved and quality seed potato, there is no standard and sufficient seed supply and distribution system in the country

2.0. Policy Recommendation

Based on the gaps discussed above, below are the policy and structural recommendations to develop a potato seed system that is capable of generating, producing and distributing new seed potato varieties that meet the needs of all farmers, in a cost-effective way.

a. Increase the effective demand for improved varieties among smallholders and other potato users

For effective development of the potato seed industry, there is need for demand driven approach in the research, breeding, production and multiplication of potato seed. Unless the users understand the importance of the improved seed, there will be no demand for the varieties. To achieve the increased demand for the varieties there deliberate efforts should be made to publicize to Smallholder Farmers, consumers and buyers the improved varieties through on-farm demonstration plots for farmers to be convinced of the superior performance of the varieties.



Tissue lab and seed multiplication farm

Publicity may also be done through media (pamphlets, and posters), providing samples to the potential buyers and conducting some marketing activities. This will give the seed users an opportunity to compare the varieties and stimulate their demand for the preferred varieties.

b. Use of Public-Private Partnerships to improve the supply of seed potato

While private sector development is not new in the value chain development agenda the focus on development of PPPs is critical for development of policies and practices. PPPs positively impact economic growth at the industry level through increased investment, output and export. In these PPPs, the companies work with small-scale producers according to a variety of contractual arrangements, or they delegate the management of producer-owned primary processing centres to small producers' organizations.

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The PPPs may also take a form of joint ventures between private companies and producers' groups in which a new enterprise is set up in which small-scale producers and the private-sector company co-own the business along part of (e.g. at the processing stage) or the whole value chain. PPPs are far more likely to benefit smallholder producers if the innovation capacity

for smallholders to respond to market changes is established and when smallholder bargaining power is strengthened vis-à-vis large buyers.

In these PPPs, the role of Government and development Partners will be to provide:

- Irrigation facilities for dry season Seed Potato production by Farmers, Seed growers as well as the Private Sector
- Storage facilities for both Seed Potato and Table Potato storage to reduce post-harvest losses.
- In cases where they cannot provide the facilities, they may provide soft loan for investment in seed stores and cold stores and irrigation facilities
- Training of Agriculture Extension Staff and Farmers on improved production practices and on how to improve quality of on-farm saved seed is very important considering the large volume of seed from Informal Seed System in the country.

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c. There should be a well-structured System for Seed Quality Inspection and Certification for Commercial Seed Potato Production

To ensure that farmers and seed users are provided with quality seed, there is need to have well-structured and strengthened system for Seed Quality Inspection and Certification. These systems will be used to provide seed standards in collaboration with the Ministry of Agriculture, Irrigation and Water Development which will be known by the seed users and to ensure adherence to these standards. There is need to have adequate and well trained human resource to undertake the inspection and also readily available chemicals for the indexing of the potato and bacterial wilt assessment.

The labs, tissue house needs to have Electricity back-up systems to be used in cases of power

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ouage. The structure may also be used to ensure that there is a formal recognition of institutions to be involved in the seed multiplication and distribute and that only accredited institutions should be found with and distribute the seed.

d. Improved access to financial services; VSLAs, SACCOs, contract farming, commodity exchanges

Finance has not been easily available to new and smallholder farmers due to high interest rates and collateral. This limited access to finance places the burden on smallholder farmers who are not well-equipped to finance their operations. There is need to facilitate the availability and accessibility of finances for low income smallholder potato producers to be able purchase and maintain the quality of see.

e. Strengthened capacity of farmers in seed selection, treatment and storage

Smallholder farmers need to be trained in better seed selection, treatment and storage from their own farms. Own saved seed might be appropriate to increase farmers' production in cases where farmers cannot access and or afford improved seed. The smallholder farmers need to be trained on how to stabilize the varieties they have selected.

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The views and recommendations in this policy brief do not necessarily reflect those of the individuals or organizations that have kindly contributed to its production. This Policy Brief is intended to contribute to debates on important agricultural policy issues along the potato value chain.

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