Policy options for advancing seed systems in Vietnam

A middle path to seed systems development holds promise for farmers and consumers by promoting sensible regulations and improved information sharing.

Key messages

1. The absence of an effective regulatory system to govern seed systems for vegetatively-propagated crops (VPCs) results in low access to high-quality planting material and increasing risk of pest and disease transmission. In Vietnam, a regulatory blueprint for cereals disregards the distinct biological nature of VPCs.

2. IN VIETNAM, quality assurance of VPC planting material is largely informal: trust and reputation between buyers and sellers is a major pillar in exchanges of planting materials, thus limiting the market to very localized scales.

3. Policy options for advancing seed systems include formal recognition of farmer-saved seed as seed class use of truthful labeling and seed traceability technologies to improve information flows; investment in early-generation seed production; and promotion of domestic seed production by foreign and domestic enterprises.
Background

In many Asian countries, seed systems for VPCs are governed by a regulatory blueprint for cereals. This approach tends to disregard the distinct biological characteristics of VPCs, thus limiting farmers’ access to high-quality planting material and increasing the risk of pest and disease transmission. Clonal propagation offers several advantages, including low-cost and often rapid production of planting materials of identical genotypes. However, the quality of clonally-propagated planting material tends to degenerate across time with a build-up of pests and diseases on or in the material itself. Also, in the case of potato, seed potato is essentially the same plant part as ware potato. As such, seed potato is a credence good1, as seed quality cannot be assessed upon visual inspections.

We focus on two VPCs: cassava and potato, the former of which is primarily used for industrial purposes, and the latter as primarily a cash crop, cultivated for the fresh and processing markets. The research drew together scientists from the International Potato Center (CIP), the Alliance of Biodiversity and CIAT, the International Food Policy Research Institute (IFPRI), and Michigan State University.

The study was conducted in Vietnam in 2017, amassing data from different actors of the seed system value chain for VPCs through interviews. Through more effective policies aimed at seed systems for VPCs, access to high-quality planting material can be increased and risk of pest and disease transmission reduced.

Objectives

To promote more access to high-quality planting material for farmers in Vietnam, this study aimed to fill three objectives:

• To analyze quality-assurance mechanisms adopted by key actors of the VPC value chain, and the suitability of existing policies and regulations governing the VPC sector, with a focus on the diversity of seed providers and farmer typologies in the cassava and potato sectors;

• To discuss the tradeoffs and unintended consequences associated with the current policy framework in Vietnam; and

• To explore the viability of alternative frameworks to improve farmers’ access to quality VPC planting material.

We argue that Vietnam’s seed policy framework – the laws, rules, regulations, and guidelines that govern both the genetic improvement of crops and the production and exchange of planting material – are weakly adapted to the unique requirements of VPCs. This absence of effective policy and regulation may limit farmers’ access to planting material of superior genetic and physical quality, thereby increasing the risk of pest and disease transmission and reducing expected gains in productivity of VPCs. However, we also recognize that a formal quality-assurance system that relies on certified seed production, inspection, and distribution may not be entirely appropriate or feasible in this context, at least not in the short run.

Approach

The study mainly draws on primary data collection: a series of key informant interviews (KIIs) and focus group discussions (FGDs) conducted with seed system actors. The KIIs and FGDs were conducted in 2017 using semi-structured interview guides that were developed for each category of actors as part of a larger cross-country project on seed systems and markets for VPCs. The interview guides covered topics that ranged from quality-assurance standards and practices to viewpoints on the effectiveness of current policies and regulations. A total of 18 KIIs and FGDs were conducted in 2017 with 39 individuals from across 18 different types of stakeholders (e.g., farmers, consumers, traders) in the cassava and potato seed sector.

1. A “credence good” is a type of good with qualities that cannot be observed by the consumer after purchase, making it difficult to assess its utility.
Achievements and policy implications

The data collected through KIIIs and FGDs yielded data that support two findings:

1. Actors employed various quality assurance mechanisms to obtain clean seed, ranging from visual inspection of seed, seed surveillance and containment, to supporting the domestic production of quality-declared seed.

2. In the absence of certification, trust and reputation between seller/producer and buyers are critical to assure quality of planting material.

There also appear to be two primary approaches in Vietnam for increasing access to quality planting material. The status quo approach continues the government’s allowance of uncertified seed sales with possible exceptions to seed imported through border points where phytosanitary inspection and quarantine are feasible. On the other hand, strict mandatory certification of planting material and rigorous enforcement of regulations is likely to have high expense to the government for implementation relative to what it currently spends to monitor VPC seeds. Given these options, we advise a middle-of-the-road approach for increasing access to quality planting material.

This approach has five main pillars

1. Establish and recognize farmer-saved seed as its own seed class. Currently commercial trade of farmer-saved seed is illegal

2. Current seed sales are characterized by information asymmetries between seed sellers and buyers. This situation could be remedied by ideas such as “truthful labeling,” which is designed to provide buyers with information on variety name and origin, purity and germination rates to help buyers choose the appropriate product for their specific needs. “Product traceability systems” could allow farmers to validate the authenticity and quality of a seed package via a simple text message or a smartphone app. The technological options range from barcoded scratch cards on seed packages to blockchain technologies to store digitally unalterable information used in a market exchange.

3. Investments in early-generation seed production facilities at research stations and universities could reduce costs of seed production while increasing production. The seed generated in these facilities could be used as a production input by private seed producers.
4. **Investment incentives and regulations might also be used to attract foreign crop-science and seed companies working in Vietnam** to produce seed in-country rather than import their varieties. In the longer-term, this strategy could be used to transform Vietnam into a VPC seed production hub for Asia.

5. **Promote preventative pest and disease management by the use of quarantine and destroying infected crops in response to reported pest or disease incidences.** Instead, require qualified inspectors to make frequent visits to identified hot spots and more closely monitor the planting material. Vietnam's Plan for Zero Hunger by 2025 calls for increasing access to nutritious foods and the diversification of diets throughout the country. Roots, tubers and bananas can play their part in achieving that goal. The contribution of VPCs depend largely on the access to affordable and accessible high-quality planting material and this access will significantly influence Vietnam's progress toward its goals. Moving from localized and informal seed systems based primarily on trust and reputation to seed systems that are scalable and resilient to climate change will require policy experimentation and innovation in seed system regulation.