


Benchmarking the Business of Agriculture

A joint program by the Agriculture and Environmental Services (AES) and Global Indicators and Analysis Department (GIA)

The World Bank Group's Benchmarking the Business of Agriculture Advisory Meeting
June 11, 2013

IFC Headquarters
Washington, D.C.

Snapshot - Access to Commercial Seeds[1]

Commercial Seeds: relevance and main constraints

"Plant breeding has significantly contributed and will continue to be a major contributor to increased food security whilst reducing input costs, greenhouse gas emissions and deforestation. With that, plant breeding significantly mitigates the effects of population growth, climate change and other social and physical challenges."[i]

Improved seeds represent a key technology component for the improvement of agricultural productivity.[ii] Research shows that improved seeds account for about 30-50 per cent of the increase in crop yields and that the adoption of improved varieties is a prerequisite for increasing agricultural productivity and enhancing profitability of farmers, especially for small holders seeking to commercialize their production.

Studies have shown that access to quality and improved seed by farmers is affected when the seed sector is too heavily regulated by the Government and private participation is restricted.[iii] Too often strict legal and regulatory requirements are imposed on the production of seeds and on the seed industry, which limit the start-up and expansion of seed businesses without providing substantial public benefit.[iv]

Experiences from diverse economies in Latin America, Africa and elsewhere suggests that government treatment of seed-related business often has a pernicious effect, limiting private sector participation and adding production costs and delays. This behavior puts access to improved seed beyond the reach of smallholders and even some larger agribusinesses.[v] There is general consensus that for a vibrant and healthy seed industry to develop policies should instead focus on offering initial support to the private sector while enabling it to adapt to the market and develop independently through a transparent, rules-based legal and regulatory system. Government seed policy should encourage and support private sector growth in order to spur innovation and maximize access to productive genetic resources. [vi]

The BBA indicators aim to identify regulatory barriers and other policies that are restricting the production and distribution of improved seeds from formal sources. The Access to Commercial Seeds Indicators hope to stimulate dialogue between the policy makers and private sectors in a manner that encourages the public-private partnership and creates space for the private sector to compete and help address the shortages of improved varieties of seeds farmers face in many countries.

Proposed focus of the Access to Commercial Seeds indicators

- The indicators will focus on the introduction of new varieties of seeds by formal sources.[2]

[1] This indicator will focus on improved seeds from formal sources.

- The Doing Business in Agriculture Indicators (DBA) aim to illustrate and identify the legal and regulatory bottlenecks that contribute to impeding the timely introduction of new seed varieties and their distribution to farmers. This will be done through selected indicators: legal indicators - measuring the regulations that are in place - and time and motion indicators - which capture the time, cost and number of procedures required to legally comply with the corresponding regulations.
- The Deep Dive (DD) aims to broaden the scope of these indicators for policy makers by focusing on the operational and economic factors affecting access to commercial seeds as well as the implementation of legislation affecting the seed industry.
- The Access to Commercial Seeds indicators will be divided into four areas of focus:
  a) General legal and regulatory framework,
  b) Seed System,
  c) Movement of Seeds,
  d) Seed Industry.

Sub category a. General Seed regulatory framework

Outdated and incoherent seed laws and changes in policy make it difficult for the private sector to thrive. The Deep Dives will look at the changes in policy over the last 5 years in specific countries and how this affects the seed industry.

Additionally, in light of successful best international practices, a special focus on regional harmonization of seeds laws and their stages of implementation will be taken across the topics and throughout the Deep Dive studies.

Doing Business in Agriculture regulatory indicators	**Deep Dive topic areas and indicators**
The regulatory framework will not be a stand-alone topic but rather inherently captured throughout the indicators.	• How many changes in policy over last 5 years? • Existence and implementation of regional & national seed laws & regulations; Stage of implementation and harmonization.

Sub category b. Seed System

This section will focus on policies affecting the production of new breeder seed, the steps required to introduce new varieties and seed quality controls. Farmers need access to local and international seed technology and lengthy delays and restrictions in these areas diminish their access to improved seeds.

The production of breeder seed may be highly regulated affecting the development of new improved seed varieties. For example in many countries public research centers are the only bodies allowed to do R&D and create new breeder seeds. In countries where the private sector is allowed to produce breeder seed there might be restrictions on the import of germplasm and other plant materials. Furthermore, germplasm produced by the local public research center may not be accessible by private companies.

In regards to the introduction of new varieties, most governments establish control systems by which they evaluate the performance of new varieties so that farmers get quality commercial seeds. However, in many countries these controls are so expensive and lengthy that firms limit the amount of varieties they submit for registration. In some occasions governments only allow public sector developed varieties to be registered.

Finally, seed quality controls matter because they look at the quality of seeds to be distributed in the formal market. In many countries this process can be lengthy and costly, and become an obstacle to introducing new varieties, therefore affecting farmers' access to commercial seeds. Also, they might not be sufficient to ensure seed quality at the retail level, add cost and opportunities for corruption, and limit competition, since small companies cannot afford to wait or pay the high costs of these procedures.

1. Production of new breeder seed - Producer private/public - Access to germplasm (foreign and domestic)	**Doing Business in Agriculture regulatory indicators** i) Legal indicators - Who can research and produce seed? - Can germplasm be imported? - Can germplasm be acquired from public labs?	**Deep Dive topic areas and indicators** • Number of Plant Breeders per 1,000,000 people • % of breeder seeds provided by government/public organization

[2] Although sources from the informal sector are an important source for farmers, data on their distribution would be difficult to accurately capture with the BBA methodology.

	ii) Time and motion: measuring the steps and how the breeding, research and obtention of germplasm are done in practice.	
2. Steps required to introduce new varieties. - Existence of controls - Testing and registration	**Doing Business in Agriculture regulatory indicators** i) Time and motion indicator: Length of time, cost of testing and number of procedures required for the testing and registration of new varieties in a given country.	**Deep Dive topic areas and indicators** • Average yields and yield gaps of major Staples • Number of Plant varieties released in the past 6 years • % staple crop area planted to certified/improved seed • % of seed sourced from the informal seed sector including farmer saved seeds and farmer to farmer seed transfer • % of total area planted to certified/improved seeds • Variety Replacement Ratio • Seed Replacement Ratio (SRR)- The ratio of the land area under certified seed from formal sources/commercial seeds to the ration of the land under seeds from informal seeds/framer to farmer transfer/farmer saved seeds.
3. Seed quality controls - What does the national seed law require: Certification, seed testing, quality assured, and truth in labeling?	**Doing Business in Agriculture regulatory indicators** i) Time and motion: Cost, length of time and procedures required for the legal introduction of a new variety into a given country.	**Deep Dive topic areas and indicators** • Regional agreements for harmonization of quality controls.
Sub category c. Movement of Seeds Some countries do not allow for the import or export of seeds. In other cases, when seeds can be imported or exported, Governments may place excessive testing and phytosanitary requirements that do not represent the true risks and that can be used as non-trade barriers. Regulations in this area need to be smart, in accordance with international best practice. *"Seed trade is constrained by the differing trade facilitation capacity of countries. Some countries have customs, plant health, and seed authorities at borders-crossing points, whereas others just have a single customs official, who lacks knowledge on seed procedures."*[vii]		
1. Phytosanitary controls for international and domestic trade.	**Doing Business in Agriculture regulatory indicators** i) Legal indicators: Are you legally allowed to import and export seeds? ii) Time and motion indicators: Length of time, cost of testing and procedures required to import and export seeds and SPS requirements. iii) Evidence of non-trade barriers?	**Deep Dive topic areas and indicators** • Sales of imported seed as % total sales of certified/improved seeds.
Sub-category d. Seed Industry The existence of Intellectual property rights protecting plant varieties and breeder's rights has been recognized as *"crucial for a sustainable contribution of plant breeding and seed supply. An effective system of plant variety protection is a key enabler for investment in breeding and the development of new varieties of plants".* [viii] Accordingly this section will analyze the existence of PVP		

and PBR laws and their alignment to best international practices based on the 1991 UPOV Convention.

In addition this section will measure the regulatory obstacles affecting the development of a thriving private sector seed industry. Private seed companies are crucial in the process of introducing new and improved seed varieties as they are directly in touch with farmer's needs, tailoring the production or sale of new varieties to meet the market's requirements. Nevertheless too often Governments require burdensome licenses for the startup of a seed company or an agro input dealership thereby preventing small companies from entering the market.

1. Intellectual property rights	**Doing Business in Agriculture regulatory indicators** i) Legal indicator: Existence of PBR's and PVP law and its components (in compliance with UPOV).	.
2. Who can become a seed company?	**Doing Business in Agriculture regulatory indicators** i) Time and motion indicators: Length of time, cost and procedures required to start a seed company.	**Deep Dive topic areas and indicators** • Number of private seed companies operating in the countries • Share of private seed companies in certified/improved seeds from the formal seed sector • % of foundation seed provided by government organizations
3. Who can distribute seeds? - Agro-input dealers - Public distribution schemes	**Doing Business in Agriculture regulatory indicators** i) Time and motion: Length of time, procedures & cost required to set up an agricultural -input dealership.	**Deep Dive topic areas and indicators** • Seed dealer density / distance to farmers

Sub category e. Additional areas of interest

BBA has identified two other areas of interest that affect farmer's access to improved seeds. These may be researched and possibly captured in the indicators.

Government price fixing of seeds and determining retail prices can result in market distortions and failures in the seed system. Such pricing mechanisms do not allow the private sector to produce enough quantities that can generate a reasonable level of economic profit to leverage private sector participation and motivate other private firms to enter the market.[ix] In addition subsidies in certain countries can become highly political. It has also been argued that in SSA subsidies crowd out commercial seed purchases by smallholders.[x]

Finally fraud in seed retail is rampant in some regions and is a major problem faced by the seed industry. If farmers try new seeds and end up buying fake seeds instead they lose confidence in the improved seeds. BBA will attempt to identify which mechanisms the Government has in place to tackle this problem.

1. Policies affecting the cost of seeds	**Doing Business in Agriculture regulatory indicators** i) Is the purchase of seeds subsidized and how? ii) How often do the changes in subsidies occur? iii) Is the price of seed fixed by the Government?	**Deep Dive topic areas and indicators** • Seed to Grain Price Ratio (Profitability and Risk prospects in certified seed business)
2. Sanctions and their enforcement for fraudulent practices	**Doing Business in Agriculture regulatory indicators** i) Public sector resources devoted to tackle fraud: i.e.: number of inspectors in a region. ii) Available mechanisms for prosecution - law & enforcement.	

[i] Statement issued in 2009 from the Second World Seed Conference organized in collaboration with the OECD, UPOV, ITPGRFA, ISTA, ISF

[ii] Tripp 1998

[iii] Agribusiness Indicators,WBG.

[iv] USAID, EAT, Iowa State University, Policy Brief, No.1, Building an Enabling Environment for Seed Sector Growth, Nov. 2011.

[v] USAID, EAT, Iowa State University, Policy Brief, No.1, Building an Enabling Environment for Seed Sector Growth, Nov. 2011.

[vi] USAID, EAT, Iowa State University, Policy Brief, No.1, Building an Enabling Environment for Seed Sector Growth, Nov. 2011

[vii] USAID Policy Brief No.1 Nov.2011

[viii] Statement from the Second World Seed Conference held at the FAO headquarters from September 8-10 2009 and organized in collaboration with the OECD, UPOV, ITPGRFA, ISTA, ISF.

[ix] Agribusiness Indicators: Ethiopia Country Study.p17. WBG

[x] Disrupting Demand for Commercial Seed: Input Subsidies in Malawi and Zambia, Nicole M. Mason and Jacob Ricker-Gilbert, Working Paper No. 63, April 2012