



# Regulatory Issues in Pakistan's Seed Sector

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62% of farmers' seed requirement in Pakistan is met by the informal sector. In the absence of regulatory oversight, most of the informally provided seed is of low quality. Consequently, farmers are unable to harness the full potential of their labour. Ironically, this widespread informality is a product of an archaic and bureaucratic legal and institutional structure, which was created in the 1970s and has failed to keep pace with structural changes in agriculture.

Let me illustrate this using cotton as an example. Based on a province-wide sample of cotton cultivation in 2020, Punjab's Crop Reporting Services observed that 21 approved varieties were being cultivated on 50.56% of cotton area in the province and 52 unapproved varieties were being cultivated on the remaining area (i.e. 49.44%). All but 5 of the unapproved varieties were genetically modified (GM) insect-resistant varieties. This means in Punjab – and there is no reason for other provinces to be any different – about half of cotton seed is provided by the informal sector.

This is an alarming situation and shows how irrelevant government's regulation has become. In addition to the usual evaluation and approval by the Federal Seed Certification and Registration Department (FSC&RD), GM varieties must undergo assessment for their biosafety. Above data shows that this was not the case for 47 GM varieties in 2020 whose seeds were produced and sold by the informal sector. No wonder several GM cotton varieties in Pakistan express insufficient toxin level to kill target pests (viz. bollworms), which have started to develop resistance.

The informal sector comprises of seed companies, public and private breeders, seed dealers and large farmers. They not only develop their own varieties of various crops but also produce seed of approved varieties. Often, they have a breeding infrastructure ranging from basic to advanced and have a significant market presence. The question arises why these actors prefer to commercialize their new crop varieties in the informal, rather than the formal sector. This is largely due to the bureaucratic and lengthy procedure for va-

riety testing and approval. Once a breeder wants to commercialize a new variety, he is required to submit its seeds for evaluation, which takes at least two years. Since the breeder is ready to enter the market, this is an unnecessary wait for him. More importantly, the new variety is vulnerable to piracy during various stages of evaluation, which is carried out in various parts of Pakistan on research stations and farmers' fields. It is necessary to conduct such large-scale evaluation to assess new varieties' suitability for different agro-ecological zones. But this effectively puts a breeder's innovation in his competitors' hands, who may unscrupulously produce and sell new seeds while he awaits formal approval from the regulator. Furthermore, it becomes possible for public institutes to rig evaluation data in favour of their varieties.

Due to these reasons, most breeders prefer to commercialize their new varieties in the informal sector, i.e. without submitting them to FSC&RD for evaluation. This option is exercised by serious players with an established market presence as well as fly-by-night operations seeking to make a quick buck. Seeds of these new varieties are clearly identifiable to their breeder and are often sold under company labels. After a few years when the new variety has exhausted its commercial potential, the breeder would put it in the formal approval process. Thus, most seed sector actors are simultaneously part of the formal and the informal sectors, boundaries between which are more blurred than often realized.

In 2015, the government tried to address the seed sector issues by amending the Seed Act of 1976. But this made the matters worse. Instead of reducing the administrative burden, the 2015 amendment increased it. The sector now suffers from restrictive governance more than ever before. Not only regulation extends to all crops, including commercially insignificant ones, all seed businesses – companies, processing plants, dealers, etc. – need to register with the regulator and periodically renew it. Ironically, there is a gross mismatch between institutional capacity of the regulator, viz. FSC&RD and its responsibilities. For example, seed certification, which is to be

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done through periodic inspections while seed is being produced on farmers' fields across the country, is a mandatory activity but there are only 29 inspectors for doing this mammoth task. Consequently, regulation is spread too thin to be effective. FSC&RD will require a standing army of thousands of inspectors and other staff if it wants to meaningfully perform the multiple functions assigned to it by the Seed Act.

Clearly, there exists a strong case for rethinking the regulatory framework. Regulation should extend only to crops of commercial importance. This would allow FSC&RD to focus its regulatory capacity on important crops. Even for these crops, variety development and seed production should be liberalized. Companies and public institutes should be able to commercialize their new varieties with as little restriction as possible. Government's role should be restricted to specifying standards and ensuring that new varieties conform to them. This can be done through rigorous testing post-

commercialization. FSC&RD can take samples from various sale outlets and evaluate seeds against specified standards. Any company that has commercialized low quality seed should be penalized according to the extent of deviation from prescribed standards. As for varieties that meet these standards, farmers' buying choices should decide which ones stay in the market and which ones perish.

It is worth noting that similar systems are in place in most countries of the world, including India. In the US, Australia, India, etc., breeders can commercialize their varieties/hybrids without mandatory regulatory approval. The regulator rigorously tests them post-release for compliance of standards. In fact, Pakistan is one of the handful of countries that still require variety evaluation prior to commercialization. It is high time Pakistan too moves to reduce administrative burden on seed producers. Restrictive governance serves no purpose other than to stifle growth of the seed