



The Value of Agriculture's Seed Production Sector

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A crucial area of agriculture is the seed production industry, which deals with the development, multiplication, and distribution of seeds to farmers. It is essential to the world's food supply chain because it makes sure that high-quality seeds are available for planting and supports agricultural production, sustainability, and food security. The significance that seed production plays in guaranteeing agricultural productivity, enhancing the environment, and fostering economic progress makes it clear how important it is to agriculture.



What is a seed industry?

Seed industry means doing business in connection with breeding, propagation, production, processing, assignment, leasing, export, import, or display of the seeds.

Seed Multiplication

There are generally recognized classes of seeds. They are

Nuclear seed: This is the 100% genetically pure seed with physical purity and produced by the original breeder/Institute /State Agriculture University (SAU) from basic nucleus seed stock. A pedigree certificate is issued by the producing breeder. The basis of seed multiplication of all notified varieties/hybrids is the Nucleus seed.

Breeder seed: The progeny of nucleus seed multiplied in large area as per indent of Department of Agriculture and Cooperation (DOAC), Ministry of Agriculture, Government of India, under supervision of plant breeder / institute / SAUs and monitored by a committee consisting of the representatives of state seed certification agency, national / state seed corporations, ICAR nominee and concerned breeder. This is also 100% physical and genetic pure seed for production of foundation seed. A golden yellow colour certificate is issued for this category of seed by the producing breeder.

Foundation seed: The progeny of breeder seed produced by recognized seed producing agencies in public and private sector, under supervision of seed certification agencies in such a way that its quality is maintained according to prescribed field and seed standards. A white colour certificate is issued for foundation seed by seed certification agencies.

Registered seed: Registered seed shall be the progeny of foundation seed that is so handled as to maintain its genetic identity and purity according to standard specified for the particular crop being certified. A purple colour certificate is issued for this category of seed.

Certified seed: The progeny of foundation seed produced by registered seed growers under supervision of seed certification agencies to maintain the seed quality as per minimum seed

certification standards. A blue colour certificate is issued by seed certification agency for this category of seed.

Labelled Seed: The seed notified under Section 5 of the Seeds Act, 1966, such seed sold in the market has to be labelled as prescribed under Section 6(a) and (b) of the Seeds Act Such seed is called Labelled Seed.

Importance of Seed Production Sector in Agriculture

The quality and quantity of seeds used for planting have a direct influence on agricultural output. Good seeds may boost crop yield, lower production costs, and improve the nutritional value of crops. Additionally, the manufacturing of seeds encourages farmers to switch to organic farming methods and lessens their dependency on synthetic pesticides and fertilisers. Producing seeds helps maintain environmental sustainability by giving farmers access to resistant strains, drought-tolerant strains, and climate-adaptable variations.

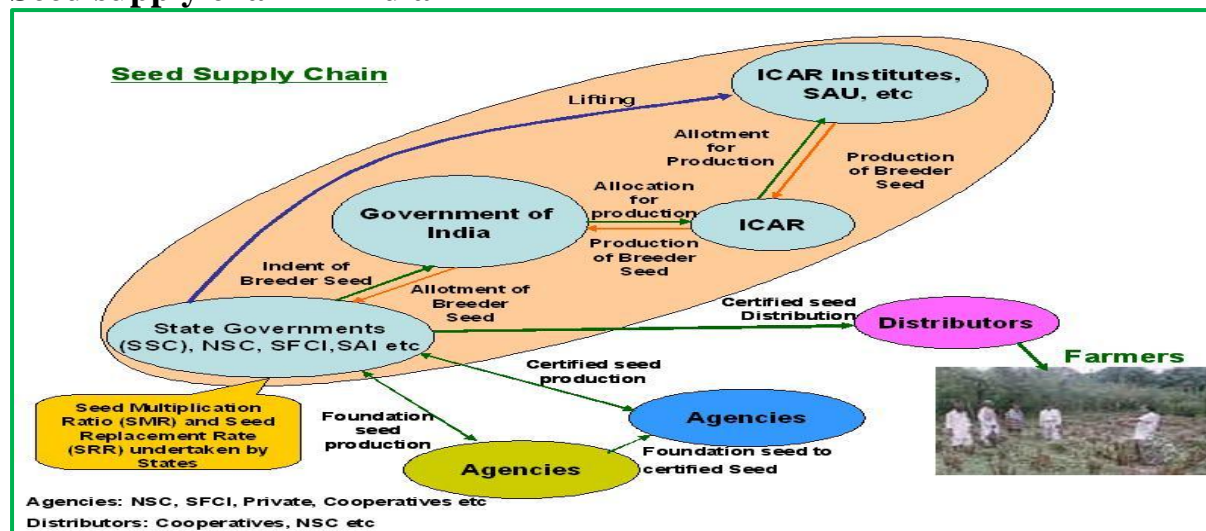
Economic expansion creates work chances and income-generating opportunities, which significantly contributes to seed production. Diverse talents are needed for seed production, from research and development through manufacturing and distribution, producing opportunities for experts. Additionally, seed production helps smallholder farmers by supplying them with high-quality, reasonably priced seeds that can boost their income and enhance their standard of living.

Implementation of Seed Related Schemes

The Government is implementing various schemes to strengthen the seed production chain & to enhance availability of quality seeds & planting material of crops to farmers across the country through various schemes viz., National Food Security Mission (NFSM), Sub-Missions under National Mission for Sustainable Agriculture (NMSA) [Sub-Mission on Seeds & Planting Material (SMSP) & Organic Value Chain Development for North Eastern Region] and Rashtriya Krishi Vikas Yojana RAFTAAR (RKVY-RKVY-RAFTAAR) which provides provision for seed production and distribution.

Besides, the Indian Council of Agricultural Research- Indian Institute of Seed Science (ICAR-IISS), Mau is coordinating two nation-wide network projects viz. All India Coordinated Research Project (AICRP) - National Seed Project (Crops) and ICAR Seed Project. AICRP-NSP (Crops) is mandated to produce breeder seed as per the national requirement. The breeder seed thus produced, is supplied to indenting agencies including public and private sector for downstream production of foundation and certified seed in subsequent years for supply to the farmer.

Seed supply chain in India



Some Famous Seed Companies in India

- National Seeds Corporation Ltd.
- Maharashtra Hybrid Seeds Company Pvt. Ltd. (Mahyco)
- JK Agri-Genetics Ltd. (JK Seeds)
- Kalash Seeds Pvt. Ltd.
- Kaveri Seed Company Ltd.
- VNR seeds Pvt.Ltd.
- Krishidhan Seeds Pvt. Ltd.
- Nuziveedu Seeds Ltd.
- Rasi Seeds Pvt. Ltd.
- Eagle seeds Pvt.Ltd.

Challenges in Seed Production Sector

The seed production industry faces difficulties such as a lack of infrastructure, restricted access to technology, and onerous regulatory requirements.

Conclusion

Agriculture's seed production industry is essential to agricultural yield, environmental sustainability, and economic expansion. But the industry confronts a number of difficulties, such as a lack of infrastructure, restricted access to technology, and onerous regulatory requirements. Governments, corporate sector players, and civil society organisations must work together to invest in seed production infrastructure, develop cutting-edge technologies, and build legislative frameworks that support sustainable seed production and distribution in order to solve these difficulties. By doing this, the seed industry continues to play a significant role in the world's food security and agricultural output.