

MCQ Question · mcqquestion.com

The Seed Sector in India

Free · Share

The Seed Sector in India

Every good harvest starts with a good seed. India’s seed sector is the vast, mostly invisible system that makes sure farmers get one.

At a Glance

Four facts to hold on to.

01
3,236

New field crop varieties released, 2014–2025.

02
10,802

Plant varieties registered under the PPV&FR Act.

03
178

Notified seed testing laboratories.

04
1,317

ICAR licensing agreements, 2023-24 to 2025-26.

Seeds Act, 1966 The core seed-quality law.
PPV&FR Act, 2001 Rights for breeders and farmers.
NARES National Agricultural Research and Education System.
SATHI Seed Authentication, Traceability and Holistic Inventory portal.

Chapter 1: The Laws and Institutions

Must Know

The Seeds Act, 1966

- The Seeds Act, 1966, is the core law. With the Seeds Rules, 1968, and the Seeds (Control) Order, 1983, it regulates seed quality nationwide.
- These laws let State Governments inspect, test and enforce seed quality.
- They also help curb the sale of sub-standard or spurious seed.

The PPV&FR Act, 2001

- It grants intellectual property rights to plant breeders.
- It also protects the farmer's traditional right to save and exchange seed.
- It was timed in 2001 as one framework for both breeders and farmers.

Who produces and tests seed

- The National Seeds Corporation (NSC) was founded in 1963. It works alongside 17 State Seed Corporations to produce and distribute seed.
- Seed research runs through NARES. It spans 56 ICAR Institutes, 48 State Agricultural Universities and 3 Central Agricultural Universities.
- 178 notified Seed Testing Laboratories check seed quality before it reaches the market.

The three-tier chain

- New seed moves from breeder seed, to foundation seed, to certified seed.
- Certified seed is what finally reaches the farmer's field.

Remember: Seeds Act 1966 = quality control. PPV&FR Act 2001 = variety ownership. Chain: breeder, foundation, certified.

> **Quick check 1.** The Seeds Act, 1966, is the law that protects breeders' rights over new plant varieties. *(True or False?)* See answer ↓

Chapter 2: Scale and Reach

Good to Know

New crop varieties

- Between 2014 and 2025, India released 3,236 new field crop varieties.
- Of these, 2,996 are climate-resilient.
- 587 of them tolerate extreme drought, flood, salinity, heat or cold.

Registered varieties

- Under the PPV&FR Act, 10,802 plant varieties across 219 crop species are registered.
- More than half of that total, 5,689, was registered in 2023-26 alone.

Production network and tracking

- 229 Seed Hubs and 384 Breeder Seed Production Centres form the backbone of seed production.

- The SATHI Portal gives the whole chain digital tracking. It covers production, certification, inventory and distribution.

Global links

- India is a founding member of the International Treaty on Plant Genetic Resources for Food and Agriculture.
- This gives Indian researchers legal access to global germplasm for breeding.

> **Quick check 2.** India is a founding member of the International Treaty on Plant Genetic Resources for Food and Agriculture. *(True or False?)* See answer ↓

Chapter 3: Origins and Partnerships

Great to Know

Rooted in the Green Revolution

- The sector's institutions trace back to the Green Revolution.
- High-yielding varieties then needed mass multiplication and distribution.
- Read more in The Green Revolution and Crop Policy.

Public-private collaboration

- Between 2023-24 and 2025-26, 27 ICAR Institutes signed 1,317 licensing agreements.
- These hand publicly bred varieties to private companies for large-scale multiplication.

Two international crop-research centres

- The International Rice Research Institute's South Asia Regional Centre opened at Varanasi in 2018.
- A similar potato-research centre, near Agra, was approved on 25 June 2025.

Faster breeding

- Newer methods speed up the older breeder-to-certified chain.
- These include Marker-Assisted Selection, Gene Editing and Speed Breeding.

Exam Edge

Previous Year Questions

The Seed Village idea has been asked directly.

Chapter 4: Exam Traps

Great to Know

Do not scramble the chain

- The order is always breeder seed, foundation seed, then certified seed.
- Breeder seed is the purest and the smallest in quantity. It is produced directly under a breeder's supervision.
- Foundation seed is the next step, produced from breeder seed under close quality control.
- Certified seed is the bulk stage that a farmer buys.
- Seed Villages sit downstream. They multiply certified seed further.

Two laws, two jobs

- The Seeds Act is a quality-control law. It decides what counts as sellable seed and lets States seize spurious seed.
- The PPV&FR Act is an intellectual-property law. It protects breeders, and protects the farmer's right to save, use, exchange and sell farm-saved seed, though not under a brand.
- A farmer fighting fake seed turns to the first. A breeder registering a new variety uses the second.

Certified is not the only legal seed

- Indian law also recognises "truthfully labelled" seed.
- The producer self-declares its purity, with no third-party certification.
- The producer is still liable if the label is false.

Chapter 5: Current Affairs

Great to Know

Written Lok Sabha reply, 21 July 2026

- Minister of State for Agriculture and Farmers Welfare Ramnath Thakur gave a written reply on steps to strengthen the seed sector. (Source: PIB)
- He confirmed 3,236 field crop varieties were released between 2014 and 2025, of which 2,996 were climate-resilient.
- Under the PPV&FR Act, 5,689 varieties were registered in 2023-26, out of 10,802 in total.
- In 2025-26, India was a net seed exporter by value: ₹3,023.16 crore of exports against ₹1,755.96 crore of imports.

> **Think it through: Why does India need both the Seeds Act and the PPV&FR Act?**
>
> One protects the buyer from bad seed. The other protects the maker of a new variety, and the farmer who saves seed.

Quick Q&A

Core seed-quality law?

The Seeds Act, 1966.

When was NSC founded?

1963.

Which Act protects breeders and farmers?

PPV&FR Act, 2001.

Chain order?

Breeder, foundation, certified.

SATHI tracks?

Production, certification, inventory, distribution.

Practice: The Seed Sector in India

4 verified questions from this topic.

More Indian Economy Practice

Related Topics

All Indian Economy Articles

The Green Revolution and Crop Policy

Seed Village Concept (Beej Gram Yojana)

Practice MCQs

1. What makes the Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act, 2001, distinctive?

A. It banned the export of Indian seed varieties

B. It applies only to genetically modified crops

C. It nationalised all private seed companies

D. It grants rights to both plant breeders and farmers

See answer ↓

2. In which year was the National Seeds Corporation (NSC) founded?

A. 1947

B. 1963

C. 1991

D. 1966

See answer ↓

3. Per a 21 July 2026 Lok Sabha reply, how many of India's 3,236 new field crop varieties released between 2014 and 2025 were climate-resilient?

A. 587

B. 2,996

C. 10,802

D. 1,317

See answer ↓

4. Which one of the following best describes the main objective of 'Seed Village Concept'? [UPSC CSP 2015]

A. Encouraging the farmers to use their own farm seeds and discouraging them to buy the seeds from others

B. Earmarking some villages exclusively for the production of certified seeds

C. Identifying the entrepreneurs in villages and providing them technology and finance to set up seed companies

D. Involving the farmers for training in quality seed production and thereby to make available quality seeds to others at appropriate time and affordable cost

See answer ↓

Answer Key

1. **D.** Most such laws protect only breeders; India's PPV&FR Act also protects farmers' right to save and exchange seed. ↑ Q1
2. **B.** NSC was founded in 1963 and now works alongside 17 State Seed Corporations. ↑ Q2
3. **B.** 587 of these climate-resilient varieties were tolerant of extreme drought, flood, salinity, heat, or cold specifically. ↑ Q3
4. **D.**
   The answer is training farmers in quality seed production so quality seed reaches others at the right time and an affordable cost. UPSC's Series A answer key accepts this option for the 2015 question. The other options describe things the scheme does not do. It does not tell farmers to stop buying seed. It does not reserve villages for certified seed. It does not fund seed companies.
   ↑ Q4

Quick-check answers

1. **False.** ↑ 1
2. **True.** ↑ 2

Curated by Arsalan Zuberi · mcqquestion.com

Scan to read online

https://mcqquestion.com/articles/indeco0204-the-seed-sector-in-india/