New Shalimar Wheat

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Why in News?

Recently, the scientists at SKUAST-Kashmir developed new wheat varieties to stabilise the rice–wheat cropping cycle in Kashmir.

- **Wheat** – It is ***a rabi crop sown in October*** and harvested in early summer.
- Wheat varieties from sub-tropical regions matured late (June–July), disrupting the rice–wheat rotation.
- In Kashmir, rice is the dominant kharif crop, requiring fields to be vacated by May–June.
- **New Wheat Varieties –**
  - *Shalimar Wheat-4 (SW-4)*
  - *Shalimar Wheat-3 (SW-3)*
- **Key Features – Early Maturity –** Fits into the rice–wheat cropping system.
  - **SW-4 –** Matures by the last week of May.
  - **SW-3 –** Matures by the first week of June.
- **High Yielding –**SW-3 has potential productivity of up to 38 quintals per hectare.
- **Cold Tolerance –** Agronomic traits and cold tolerance similar to earlier wheat varieties.
- **Disease Resistance – *Resistant to yellow rust, a fungal disease***-causing stunting and yield loss in Kashmir.
- **Biofortification (SW-3) –** Iron and zinc content more than 40 ppm and protein content 12%.
- **Altitude Suitability –** Suitable for mid-altitude regions up to about 1,850 m above sea level.
- **Dual Use –** Wheat grown for grain and fodder, important for winter livestock feed.
- **Process – Conventional Breeding –** Developed through cross-breeding and selection.
- **Testing Process –** Pedigree selection (selection of the best generation of plants), multi-location testing, and farmer field trials.
- **Timeline –** Development and validation took 9–10 years.
- **Significance –** Enables timely rice transplantation, strengthens food security and farmer livelihoods, reduces rust-related crop losses, and benefits remote farmers through seed distribution.

Reference

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