

New Crop Varieties Developed by BARC released for Commercial Cultivation

Nuclear Agriculture & Biotechnology Division, BARC and SIRD Newsletter Editorial Team

Over the past several decades, Bhabha Atomic Research Centre (BARC), Trombay has played a pivotal role in developing new crop varieties by employing radiation-based mutation breeding techniques. This method, which involves exposing seeds to radiation (such as gamma rays or electron beam) for inducing beneficial genetic changes, has enabled BARC to develop climate resilient, non-GMO, high-yielding crops that are suited to India's diverse agricultural conditions. Recently, BARC, in collaboration with different state universities, has released eight new crop varieties – five cereals and three oilseeds- for commercial cultivation across various states. BARC has now dedicated a total of 70 crop varieties to the farmers and people of India with more in the offering.

Radiation for Rice Gains

Chhattisgarh Trombay Luchai Mutant (CTLM)

	Parent	Mutant
Plant Height (cm)	161	105
Maturity duration (days)	145	111
Grain yield (q/ha)	33.4	47.5



- 40% high yield
- Soft cooking quality

लुचई पैतृक



Traditional Rice Heals - Sanjeevani Rice

Sanjeevani

Specific Metabolites Identified

Immuno-boosting Properties



Rice for Saline Frontiers

Trombay Konkan Khara

- 15% higher yield
- Tolerance: 6-7 dS/m EC



Heat Resilient Wheat

Trombay Jodhpur Wheat - 153



Tolerance
Iron & Zinc
Grain yield (q/ha)

TJW-153
Multiple diseases
~ 40 ppm
50

Wheat Thriving in Stress

Trombay Raj Vijay Wheat - 155



Tolerance
Iron & Zinc
Grain yield (q/ha)

TRVW-155
Wheat Blast & Rust
40 ppm
58

An all-weather Groundnut

Chhattisgarh Trombay Mungfali



➤ 18% high yield

Rabbi Groundnut program (2024)
Variety-TG-88
Date of Sowing-25/09/2024
Sowing Distance = 25cm X 10cm
Farmer - Ghuge Brother's
Post-kehal Ta.jintur Dist.Parbhani



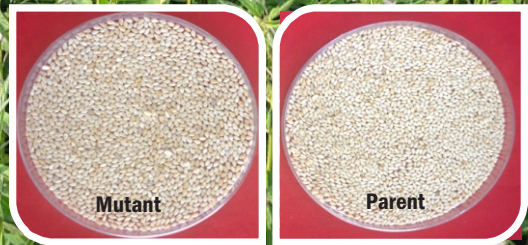
CGTM (TG-88)
Rainy & Summer
105

Season
Maturity duration (days)

High Yielding Sesame

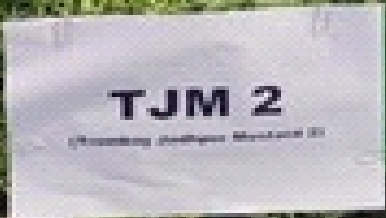
Trombay Latur Til - 10

- 15% high yield
- Bold Seed



Mustard for Oil Prosperity

Trombay Jodhpur Mustard - 2



- 14% high yield