सत्यमेव जयते

Government of India

Bhabha Atomic Research Centre

# Trombay Crop Varieties

राष्ट्र की सेवा में परमाणु

भा प अ कें

BARC

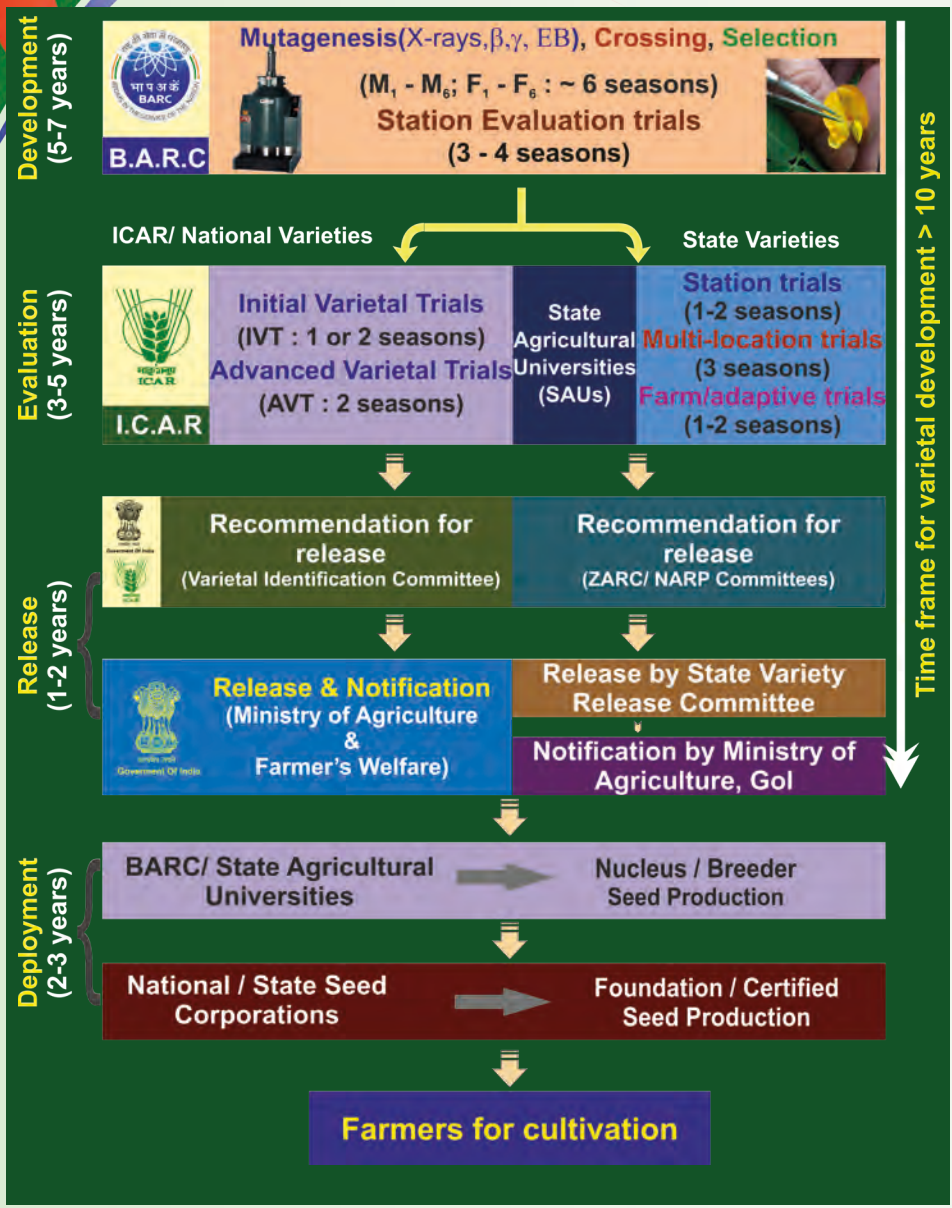
ATOMS IN THE SERVICE OF THE NATION

2023


Nuclear Agriculture and Biotechnology Division

Bio-Science Group, Trombay, Mumbai, 400 085, Maharashtra

# Timeframe for Varietal Release



# Preface

**Nuclear Agriculture and Biotechnology Division (NA&BTD)** of **Bhabha Atomic Research Centre (BARC)** has a comprehensive and inclusive research programme in crop improvement and crop production/protection technologies under the peaceful and non-power aplications of atomic energy. The active collaborative pursuit of NA&BTD with the Indian Council of Agricultural Research and various State Agricultural Universities has fructified in the release of several improved crop varieties and spin-off technologies in crop production and crop protection. Many of these varieties and technologies have colossally enhanced the income of farmers and traders, enriched the national food and nutritional security and empowered the country's vision of self-reliance (Atmanirbhar Bharat).

Induction of mutations using physical and chemical mutagens has been exploited by breeders to develop new crop varieties. Induced mutagenesis through physical mutagens is well proclaimed. A wide range of physical mutagens including UV rays, beta rays, gamma rays, x-rays, fast neutrons, thermal neutrons, electron beams, ion beams etc. are available for use in mutagenesis programme. The effective blend of mutation and recombination breeding at BARC has resulted in the release of 62 crop varieties for commercial cultivation across the country in 12 different crops (**groundnut, mustard, soybean, sunflower, linseed, mungbean, blackgram, pigeonpea, cowpea, rice, sorghum and jute**) and these have largely benefited the farmers nationwide. In addition, Trombay mutant lines have also extensively been used in several national breeding programs for crop improvement.

Apart from varietal development, a large spectrum of mutants in these crops have been generated that are being maintained for use in breeding and basic studies. In addition to the above-mentioned crops, significant strides have been made in improvement of economical traits leading to the development of several breeding lines in **chickpea, sesamum, wheat and cluster bean.** We sincerely acknowledge various agencies including Indian Council of Agricultural Research, State Agriculture Universities, State Agricultural Departments, National and State Seed Corporations, and Seed Companies for the continued support rendered by them in our agricultural research, development and deployment activities.

This bulletin gives a comprehensive overview of the Trombay crop varieties released and notified for commercial cultivation.


भा प अ कें
BARC

# Table of Contents


| Crop/Variety | Page no. |
|---|---|
| List of all crop varieties | 1-2 |
| **Groundnut** | |
| TAG-73/GG-37 | 3-4 |
| RARST-1 (Bheema, TG-47) | 5-6 |
| TBG-39/TDG-39 | 7-8 |
| TG-51 | 9-10 |
| TLG-45 | 11-12 |
| TG-38 | 13-14 |
| TG-37A | 15-16 |
| TPG-41 | 17-18 |
| TG-26 | 19-20 |
| TKG-19A | 21-22 |
| TG-22 | 23-24 |
| TAG-24 | 25-26 |
| Somnath (TGS-1) | 27-28 |
| TG-3 | 29-30 |
| TG-17 | 31-32 |
| TG-1 | 33-34 |
| **Soybean** | |
| TAMS-98-21 | 35-36 |
| TAMS-38 | 37-38 |
| **Linseed** | |
| TL-99 | 39-40 |
| **Mustard** | |
| TBM-143 | 41-42 |
| THPM-1 | 43-44 |
| BBM-1 | 45-46 |
| TAM-108-1 | 47-48 |
| TBM-204 | 49-50 |

# Table of Contents


| Crop/Variety | Page no. |
|---|---|
| **Mustard contd...** | |
| TPM-1 | 51-52 |
| TM-2 | 53-54 |
| TM-4 | 55-56 |
| **Sunflower** | |
| TAS-82 | 57-58 |
| **Mungbean** | |
| TRCRM-147 | 59-60 |
| TM-2000-2 (Pairy Mung) | 61-62 |
| TM-96-2 (Trombay Pesara) | 63-64 |
| TJM-3 | 65-66 |
| TMB-37 | 67-68 |
| TARM-18 | 69-70 |
| TARM-1 | 71-72 |
| TARM-2 | 73-74 |
| TAP-7 | 75-76 |
| **Urdbean** | |
| TJU-130 | 77-78 |
| TJU-339 | 79-80 |
| TRCRU-22 | 81-82 |
| TU-40 | 83-84 |
| TU-94-2 | 85-86 |
| TAU-2 | 87-88 |
| TPU-4 | 89-90 |
| TAU-1 | 91-92 |
| **Pigeonpea** | |
| PKV-TARA | 93-94 |
| TJT-501 | 95-96 |

# Table of Contents


| Crop/Variety | Page no. |
|---|---|
| TT-401 | 97-98 |
| TAT-10 | 99-100 |
| TT-6 | 101-102 |
| **Cowpea** | |
| TC-901 | 103-104 |
| TRC-77-4 (Khalleshwari) | 105-106 |
| **Rice** | |
| TCVM | 107-108 |
| TCSM | 109-110 |
| CGJT | 111-112 |
| Vikram-TCR | 113-114 |
| TKR-Kolam | 115-116 |
| TCDM-1 | 117-118 |
| Hari | 119-120 |
| **Sorghum** | |
| TAKPS-5 (Suruchi) | 121-122 |
| TRJP 1-5 (SPV-2538) | 123-124 |
| **Jute** | |
| TKJ-40 | 125-126 |
| List of Trombay registered mutants | 127 |

# Trombay Crop Varieties Released and Notified by

| Crop | Variety | Year of release | Recommended States | Salient features |
|---|---|---|---|---|
| Groundnut | GG-37 (TG 73, Sorath Gaurav) | 2023 | Gujarat | Higher pod yield, better shelling out turn, stay-green at harvest, summer suitable, more |
|  | TAG-73 (TG 73) | 2021 | Maharashtra | 3-seeded smooth pods |
| | TG-47 (RARS T1) | 2011 | Andhra Pradesh | Large seed, 115 days maturity, more 3 -seeded pods |
| | TDG-39 (TG-39) | 2009 | Karnataka | Large seed, medium maturity, high oleic acid, |
| | TBG-39 (TG-39) | 2008 | Rajasthan | more branches |
| | TG-51 | 2008 | WB, Odisha, Bihar, North Eastern States | Early maturity, high shelling per cent |
| | TLG-45 | 2007 | Maharashtra | Large seed, medium maturity |
|  | TG-38 | 2006 | WB, Odisha, North Eastern States, Bihar | High shelling per cent, more 3-seeded pods, stem rot tolerance |
| | TG-37A | 2004 | Rajasthan, UP, Punjab, Haryana, Gujarat, WB, Odisha, N. Eastern States | High yield, wider adaptability, smooth pods, and drought tolerance |
| | TPG-41 | 2004 | All India | Large seed, medium maturity, high oleic acid |
| | TG-26 | 1996 | Gujarat, MP, Maharashtra | Earliness, high harvest index, 20 days seed dormancy |
| | TKG-19A | 1996 | Maharashtra | Large seed, 30 days seed dormancy |
|  | TG-22 | 1994 | Bihar | Medium large seed, 50 days seed dormancy |
| | TAG-24 | 1992 | Maharashtra, Rajasthan, Karnataka, Odisha, WB | Earliness, high yield, high harvest index, high percent partitioning |
| | Somnath (TGS-1) | 1991 | Gujarat | Large seed, semi-runner type |
| | TG-3 | 1987 | Kerala | High yield |
| | TG-17 | 1985 | Maharashtra | No secondary branches, 30 days seed dormancy |
| | TG-1 | 1973 | Maharashtra, Gujarat | High yield, large seed, more branches, 50 days seed dormancy |
| Soybean | | | | |
|  | TAMS 98-21 | 2007 | Maharashtra | High yielding, resistant to bacterial pustules, *Myrothecium* leaf spot and soybean mosaic virus diseases |
| | TAMS-38 | 2005 | Maharashtra | Early maturing, resistant to bacterial pustule and *Myrothecium* leaf spot |
| Mustard | TBM-143 | 2022 | West Bengal | Appressed pod, yellow seeds, lodging resistant |
|  | THPM-1 | 2021 | Himachal Pradesh | High yield, semi-erect to erect plant, long main fruiting axis |
| | BBM-1 | 2021 | Jharkhand | High yield,bold seed, drought tolerant, long main fruiting axis |
| | TAM-108-1 | 2021 | Maharashtra | High yield, bold seed, more siliqua density |
|  | TBM-204 | 2019 | West Bengal | Yellow seed, high yield, dark green leaves, prominent constriction on siliqua |
| | TPM-1 | 2007 | Maharashtra | Yellow seed, powdery mildew tolerant, early, high yield |
| | TM-2 | 1987 | Assam | Appressed pod, high yield |
| | TM-4 | 1987 | Assam | Yellow seed, high yield |
| Sunflower | | | | |
|  | TAS-82 | 2007 | Maharashtra | Black seed coat, tolerant to drought |
| Linseed | | | | |
|  | TL-99 | 2019 | UP, Bihar, Jharkhand, WB, Assam, Nagaland | Low linolenic acid, high yield and oil content |
| Jute | | | | |
|  | TKJ-40 (Mahadev) | 1983 | Odisha | High yielding |

# the Government of India for Commercial Cultivation

| Crop | Variety | Year of release | Recommended States | Salient features |
|---|---|---|---|---|
| Mungbean | TRCRM-147 | 2023 | Karnataka | Suitable for summer, resistant to yellow mosaic disease, large seed size |
|  | TM-2000-2 (Pairy Mung) | 2010 | Chhattisgarh | Suitable for rice fallow and resistant to powdery mildew |
| | TM-96-2 (Trombay Pesara) | 2007 | Andhra Pradesh | Resistant to powdery mildew and *Corynespora* leaf spot |
| | TJM-3 | 2007 | Madhya Pradesh | Resistant to powdery mildew, YMD and *Rhizoctonia* root-rot diseases |
| | TMB-37 | 2005 | UP, Bihar, Jharkhand, Assam, WB | Tolerant to yellow mosaic virus |
|  | TARM-18 | 1997 | Maharashtra | Resistant to powdery mildew |
| | TARM-1 | 1997 | Maharashtra, Gujarat, MP, Andhra Pradesh, Kerala, TN, Odisha, Karnataka | Resistant to powdery mildew |
| | TARM-2 | 1994 | Maharashtra | Resistant to powdery mildew |
| | TAP7 | 1983 | Maharashtra, Karnataka | Tolerant to powdery mildew |
| Blackgram | TJU-130 | 2023 | Madhya Pradesh | Resistant to YMD, anthracnose, & powdery mildew, summer suitable |
|  | TJU-339 | 2023 | Madhya Pradesh | Resistant to YMD, anthracnose, & powdery mildew, summer suitable |
| | TRCRU-22 | 2023 | Karnataka | Suitable for summer, YMD resistant, medium large seeds |
|  | TU-40 | 2013 | AP, Karnataka, Odisha, TN | Suitable for rice fallows and resistant to powdery mildew |
| | TU 94-2 | 1999 | AP, Kerala, Karnataka, TN | Resistant to YMD |
| | TAU-2 | 1993 | Maharashtra | High yielding |
| | TPU-4 | 1992 | Maharashtra, MP | Large seed |
| | TAU-1 | 1985 | Maharashtra | Large seed, high yielding |
| Pigeonpea | PKV-TARA | 2013 | Maharashtra | Resistant to wilt and sterility mosaic |
|  | TJT-501 | 2009 | MP, Maharashtra, Gujarat, Chhattisgarh | High yielding, tolerant to *Phytophthora* blight, early maturing |
| | TT-401 | 2007 | MP, Maharashtra, Gujarat, Chhattisgarh | High yielding, tolerant to pod borer and pod fly damage |
| | TAT-10 | 1985 | Maharashtra | Early maturing |
| | TT-6 | 1985 | MP, Maharashtra, AP, Gujarat, Karnataka, Kerala | Large seed |
| Cowpea | TC-901 | 2018 | Gujarat, Rajasthan, MP, WB, Maharashtra, Uttarakhand | Suitable for summer, mosaic and root rot resistant, early maturing |
|  | TRC-77-4 (Khalleshwari) | 2007 | Chhattisgarh | Suitable for rice based cropping system |
| Rice | TCVM | 2021 | Chhattisgarh | Semi-dwarf, medium duration, lodging resistant & aromatic grains |
|  | TCSM | 2021 | Chhattisgarh | Semi-dwarf, high yielding (60-65 q/ha), late maturing |
| | CGJT | 2021 | Chhattisgarh | Short slender, aromatic, semi-tall, lodging resistant |
|  | Vikram-TCR | 2021 | Chhattisgarh | Semi-dwarf, lodging resistant, drought tolerant |
| | TKR-Kolam | 2020 | Maharashtra | Semi-dwarf, very fine grain, high yielding |
| | TCDM-1 | 2019 | Chhattisgarh | Semi-dwarf, lodging resistant, aromatic grains |
| | Hari | 1988 | Andhra Pradesh | Slender grain type |
| Sorghum | TAKPS-5 | 2023 | Maharashtra | Better hurda yield, early maturing, compact panicles, sweet grains |
|  | TRJP1-5 | 2023 | Karnataka | Synchronized flowering, large seeds, good roti making quality, medium duration |

# Groundnut

## TAG-73/GG-37

## (Sorath Gaurav)

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TAG-73, GG-37 (Sorath Gaurav)** |
| **Pedigree** | **Gamma ray mutant of TG 38** |
| **Year of release** | **2021(TAG-73) / 2023 (GG-37)** |
| **Notification** | **SO No. 8 (E) dt 24.12.2021<br>SO No. 1056 (E) dt 06.03.2023** |
| **Recommended region** | **Maharashtra (TAG-73)<br>Gujarat (GG-37)** |
| **Suitable season** | **Rabi/summer (October - May)** |
| **Duration** | **105-110 days** |
| **Salient features** | **More 3-seeded smooth pods, high shelling percent, stay green at harvest, pod yield of 3000-3500 kg/ha** |
| **Collaborating Institutes** | **• Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra<br>• Junagadh Agricultural University, Junagadh, Gujarat** |

# Groundnut

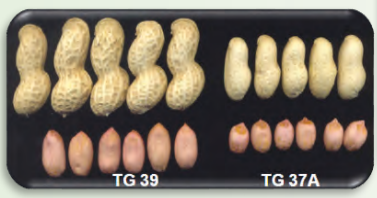
## RARST-1

**(Bheema, TG-47)**

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **RARST-1 (Bheema, TG-47)** |
| **Pedigree** | **TAG 24 X TG 19** |
| **Year of release** | **2011** |
| **Notification** | **SO No. 283 (E) dt 07.02.2011** |
| **Recommended region** | **Andhra Pradesh** |
| **Suitable season** | **Early kharif (June - October)**<br>**Rabi/summer (October - May)** |
| **Duration** | **110-115 days** |
| **Salient features** | **Large seed (65-70g/100 seeds), more 3-seeded pods, pod yield of 2500-3000 kg/ha** |
| **Collaborating Institute** | **Acharya N.G. Ranga Agricultural University, Tirupati, Andhra Pradesh** |

# Groundnut
## TBG-39/TDG-39




# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TBG-39, TDG-39** |
| **Pedigree** | **TAG 24 X TG 19** |
| **Year of release** | **2008, 2009** |
| **Notification** | **SO No. 2458 (E) dt 16.10.2008<br>SO No. 449 (E), dt 11.02.2009** |
| **Recommended region** | **Rajasthan, Karnataka** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **115-120 days** |
| **Salient features** | **Large seed (70-75g/100 seeds), high oleic acid (59%), more branches, moisture stress tolerance, pod yield of 2500-3000 kg/ha** |
| **Collaborating Institutes** | **• Rajasthan Agricultural University, Bikaner, Rajasthan<br>• University of Agricultural Sciences, Dharwad, Karnataka** |

# Groundnut
## TG-51

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-51** |
| **Pedigree** | **TG 26 X Chico** |
| **Year of release** | **2008** |
| **Notification** | **SO No. 2458 (E) dt 16.10.2008** |
| **Recommended region** | **Bihar, Odisha, West Bengal, North Eastern states** |
| **Suitable season** | **Rabi/summer (October - May)** |
| **Duration** | **90-95 days** |
| **Salient features** | **High shelling percent, more 3-seeded pods, escapes end-season drought, pod yield of 2500-3000 kg/ha, suitable for residual moisture situation** |
| **Collaborating Institute** | **ICAR-Directorate of Groundnut Research, Junagadh, Gujarat** |

# Groundnut
## TLG-45


# Groundnut (मूगॅफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TLG-45** |
| **Pedigree** | **TG 19 X TAG 24** |
| **Year of release** | **2007** |
| **Notification** | **SO No.122 (E) dt 06.02.2007** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **115-120 days** |
| **Salient features** | **Large seed (75-80g/100seds), high yielding (2500-3000 kg/ha)** |
| **Collaborating Institute** | **Vasantrao Naik Marathwada Krishi Vidyapeeth, Latur, Maharashtra** |

# Groundnut
## TG-38

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-38** |
| **Pedigree** | **Gamma ray mutant from the cross Girnar-1 X TG 26** |
| **Year of release** | **2006** |
| **Notification** | **SO No.1572(E) dt 20.09.2006** |
| **Recommended region** | **Bihar, Odisha, West Bengal, North Eastern states** |
| **Suitable season** | **Rabi/summer (October - May)** |
| **Duration** | **100-105 days** |
| **Salient features** | **High shelling percent, more 3-seeded pods and round seeds, pod yield of 2500-3000 kg/ha, suitable for rice fallows** |
| **Collaborating Institute** | **ICAR-Directorate of Groundnut Research, Junagadh, Gujarat** |

# Groundnut
## TG-37A

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-37A** |
| **Pedigree** | **TG 25 X TG 26** |
| **Year of release** | **2004** |
| **Notification** | **SO No. 161 (E) dt 04.02.2004** |
| **Recommended region** | **Bihar, Gujarat, Haryana, Odisha, Rajasthan, Punjab, UP, West Bengal, North Eastern states** |
| **Suitable season** | **Kharif/rainy (June – October) ; Rabi/summer (October - May)** |
| **Duration** | **100-105 days** |
| **Salient features** | **Smooth pods, drought tolerance, wider adaptability, pod yield of 2500-3000 kg/ha, suitable for rice fallows** |
| **Collaborating Institute** | **ICAR-Directorate of Groundnut Research, Junagadh, Gujarat** |


# Groundnut
## TPG-41

# Groundnut (मूगॅफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TPG-41** |
| **Pedigree** | **TG 28A X TG 22** |
| **Year of release** | **2004** |
| **Notification** | **SO No. 161 (E) dt 04.02.2004** |
| **Recommended region** | **All India** |
| **Suitable season** | **Rabi/summer (October - May)** |
| **Duration** | **120-125 days** |
| **Salient features** | **Large seed (70-75g/100 seeds), 20 days seed dormancy, high oleic acid (60%), pod yield of 2500-3000 kg/ha** |
| **Collaborating Institutes** | • **ICAR-Directorate of Groundnut Research, Junagadh, Gujarat**<br>• **Mahatma Phule Krishi Vidyapeeth, Jalgoan, Maharashtra** |

# Groundnut

## TG-26

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-26** |
| **Pedigree** | **BARCG 1 X TG 23** |
| **Year of release** | **1996** |
| **Notification** | **SO No. 001 (E) dt 01.01.1996** |
| **Recommended region** | **Gujarat, Madhya Pradesh, Maharashtra** |
| **Suitable season** | **Rabi/summer (October - May)** |
| **Duration** | **100-105 days** |
| **Salient features** | **Semi-dwarf, earliness, high harvest index, smooth pods, 20 days seed dormancy, Iron chlorosis tolerance, high yielding (3000-3500 kg/ha)** |
| **Collaborating Institute** | **ICAR-Directorate of Groundnut Research, Junagadh, Gujarat** |

# Groundnut
## TKG-19A

# Groundnut (मूगॅफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TKG-19A** |
| **Pedigree** | **TG 17 X TG 1** |
| **Year of release** | **1996** |
| **Notification** | **SO No. 001 (E) dt 01.01.1996** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Rabi/summer (October - May)** |
| **Duration** | **115-120 days** |
| **Salient features** | **Large seed (70-75g/100 seeds), 30 days seed dormancy, high yielding (2200-2500 kg/ha)** |
| **Collaborating Institute** | **Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Maharashtra** |

# Groundnut
## TG-22

# Groundnut (मूँगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-22** |
| **Pedigree** | **Robut 33-1 X TG 17** |
| **Year of release** | **1994** |
| **Notification** | **SO No. 636(E) dt 02.09.1994** |
| **Recommended region** | **Bihar** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **110-120 days** |
| **Salient features** | **Medium large seed (55-60g/100 seeds), 50 days seed dormancy, pod yield of 1500-2000 kg/ha** |
| **Collaborating Institute** | **Birsa Agricultural University, Kanke, Bihar** |

# Groundnut
## TAG-24

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TAG-24** |
| **Pedigree** | **TGS 2 X TGE 1** |
| **Year of release** | **1992** |
| **Notification** | **SO No. 814(E) dt 04.11.1992** |
| **Recommended region** | **Karnataka, Maharashtra, Odisha, Rajasthan, West Bengal** |
| **Suitable season** | **Rabi/summer (October - May)** |
| **Duration** | **100-105 days** |
| **Salient features** | **Semi-dwarf, earliness, high harvest index, high yielding (3000-3500 kg/ha), salinity tolerance, wider adaptability** |
| **Collaborating Institute** | **Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra** |

# Groundnut Somnath (TGS-1)


# Groundnut (मूगॅफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **Somnath (TGS-1)** |
| **Pedigree** | **TG 18A X M 13** |
| **Year of release** | **1991** |
| **Notification** | **SO No.793 (E) dt 22.11.1991** |
| **Recommended region** | **Gujarat** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **120-125 days** |
| **Salient features** | **Semi-runner type with main stem and sequential flowering, large seed (60-70g/100 seeds), high yielding (2000-2200 kg/ha)** |
| **Collaborating Institute** | **Gujarat Agricultural University, Junagadh, Gujarat** |

# Groundnut
## TG-3

# Groundnut (मूगॅफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-3** |
| **Pedigree** | **X-ray mutant of Spanish Improved** |
| **Year of release** | **1987** |
| **Notification** | **SO No.165 (E) dt 06.03.1987** |
| **Recommended region** | **Kerala** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **100-105 days** |
| **Salient features** | **High yielding (1500-2000 kg/ha), suitable for rice fallows** |
| **Collaborating Institute** | **ICAR-Indian Institute of Oilseeds Research, Hyderabad** |

# Groundnut
## TG-17

# Groundnut (मूगॅफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-17** |
| **Pedigree** | **Dark green leaf mutant X TG 1** |
| **Year of release** | **1985** |
| **Notification** | **SO No. 832(E) dt 18.11.1985** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **120-125 days** |
| **Salient features** | **No secondary branches, pod yield of 1500-1700 kg/ha, 25-30 days seed dormancy** |
| **Collaborating Institute** | **ICAR-Indian Institute of Oilseeds Research, Hyderabad** |

# Groundnut
## TG-1 (Vikram)

# Groundnut (मूॅगफली)

| | |
|---|---|
| **Botanical name** | ***Arachis hypogaea*** |
| **Common names** | **Peanut, Moongphali, Shengdhana, Verkadalai, Booimug, Nelagadale, Kallekai** |
| **Variety name** | **TG-1 (Vikram)** |
| **Pedigree** | **X-ray mutant of Spanish Improved** |
| **Year of release** | **June 1973** |
| **Recommended region** | **Gujarat and Maharashtra** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **130-135 days** |
| **Salient features** | **Large seed (85g/100 seeds), profuse branching, 60 days seed dormancy, pod yield of 1300-1500 kg/ha** |
| **Collaborating Institute** | **ICAR-Indian Institute of Oilseeds Research, Hyderabad** |

# Soybean

## TAMS-98-21

# Soybean (सोयाबीन)

| | |
|---|---|
| **Botanical name** | ***Glycine max*** |
| **Common names** | **Soja bean, Soya bean, Soya avarai** |
| **Variety name** | **TAMS-98-21** |
| **Pedigree** | **Mutant of JS-80-21** |
| **Year of release** | **2007** |
| **Notification** | **SO No. 122(E) dt 06.02.2007** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **103 days** |
| **Salient features** | **High yielding (2200 - 2400 kg/ ha), resistant to bacterial pustules, *Myrothecium* leaf spot, soybean mosaic virus and moderately resistant to rust and other leaf spot diseases** |
| **Collaborating Institute** | **Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Amravati, Maharashtra** |

# Soybean
## TAMS-38

# Soybean (सोयाबीन)

| | |
|---|---|
| **Botanical name** | ***Glycine max*** |
| **Common names** | **Soja bean, Soya bean, Soya avarai** |
| **Variety name** | **TAMS-38** |
| **Pedigree** | **Monetta x PK-472** |
| **Year of release** | **2005** |
| **Notification** | **SO No. 122 (E) dt 02.02.2005** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif/rainy (June – October)** |
| **Duration** | **95 days** |
| **Salient features** | **Early maturing, resistant to bacterial pustule and *Myrothecium* leaf spot** |
| **Collaborating Institute** | **Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Amravati, Maharashtra** |

# Linseed

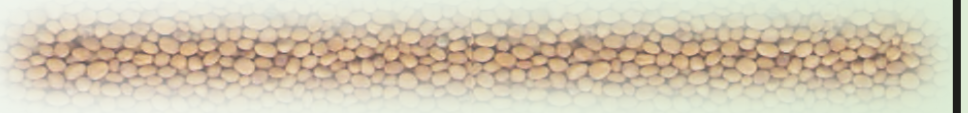
## TL-99

# Linseed (अलसी)

| | |
|---|---|
| **Botanical name** | ***Linum usitatissimum*** |
| **Common names** | **Flax, Alasi, Agase, Ali Vidai, Pesi, Cheruchana Vithu, Avise Ginzalu** |
| **Variety name** | **TL-99** |
| **Pedigree** | **RLC 6 X Solin ( Mutant Derivative)** |
| **Year of release** | **2020** |
| **Notification** | **SO No. 99(E) dt 06.01.2020** |
| **Recommended region** | **Uttar Pradesh, Bihar, Jharkhand, West Bengal, Assam and Nagaland** |
| **Suitable season** | **Rabi** |
| **Duration** | **125-130 days** |
| **Salient features** | **Low linolenic acid (2 to 5 %) suitable as edible oil, resistant to rust disease and moderately resistant to powdery mildew, *Alternaria* blight and wilt diseases** |
| **Collaborating Institute** | **ICAR- Indian Institute of Oilseeds Research, Hyderabad** |

# Mustard
# TBM-143

# Mustard (राई)



| | |
|---|---|
| **Botanical name** | *Brassica juncea* |
| **Common names** | Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive |
| **Variety name** | TBM-143 |
| **Pedigree** | TM102 x Sunbean |
| **Year of release** | 2022 |
| **Notification** | SO No. 4065 (E) dt 31.08.2022 |
| **Recommended region** | West Bengal |
| **Suitable season** | Rabi |
| **Duration** | 104 days |
| **Salient features** | Appressed pods, yellow seeds, lodging or shattering resistant |
| **Collaborating Institute** | Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal |

Field view of THPM-1 at pod stage

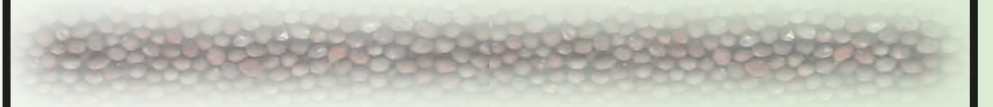
# Mustard
## THPM-1

# Mustard (राई)

| | |
|---|---|
| **Botanical name** | ***Brassica juncea*** |
| **Common names** | **Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive** |
| **Variety name** | **THPM-1** |
| **Pedigree** | **TM2 x IC264133** |
| **Year of release** | **2021** |
| **Notification** | **SO No. 8 (E) dt 24.12.2021** |
| **Recommended region** | **Himachal Pradesh** |
| **Suitable season** | **Rabi** |
| **Duration** | **150-155 days** |
| **Salient features** | **Wider adaptability, broad leaf, prominent leaf hairs** |
| **Collaborating Institute** | **CSK Himachal Pradesh Krishi Vishwavidyalaya, Palampur, Himachal Pradesh** |


# Mustard
# BBM-1

# Mustard (राई)



| | |
|---|---|
| **Botanical name** | ***Brassica juncea*** |
| **Common names** | **Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive** |
| **Variety name** | **BBM-1** |
| **Pedigree** | **TM2 x IC264133** |
| **Year of release** | **2021** |
| **Notification** | **SO No. 8 (E) dt 24.12.2021** |
| **Recommended region** | **Jharkhand** |
| **Suitable season** | **Rabi** |
| **Duration** | **112-117 days** |
| **Salient features** | **High yield, large seed, drought tolerant, moderately tolerant to *Alternaria*, white rust and powdery mildew diseases** |
| **Collaborating Institute** | **Birsa Agricultural University, Ranchi, Jharkhand** |

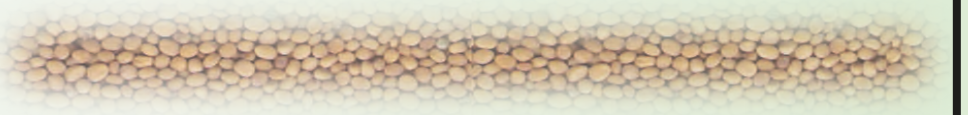
# Mustard
## TAM-108-1

# Mustard (राई)

| | |
|---|---|
| **Botanical name** | ***Brassica juncea*** |
| **Common names** | **Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive** |
| **Variety name** | **TAM-108-1** |
| **Pedigree** | **TM 102 X RB 9901(Geeta)** |
| **Year of release** | **2021** |
| **Notification** | **SO No. 8 (E) dt 24.12.2021** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Rabi** |
| **Duration** | **100-105 days** |
| **Salient features** | **High yield, large seed, more siliqua density, long main fruiting axis, less incidence of powdery mildew under early to normal sowing condition** |
| **Collaborating Institute** | **Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra** |

# Mustard
## TBM-204

# Mustard (राई)

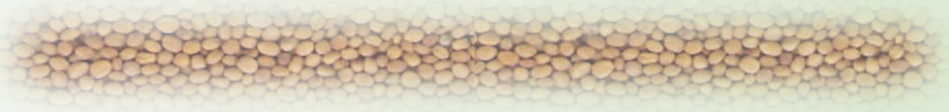


| | |
|---|---|
| **Botanical name** | *Brassica juncea* |
| **Common names** | Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive |
| **Variety name** | TBM-204 |
| **Pedigree** | TM102 x TM28 |
| **Year of release** | 2019 |
| **Notification** | SO No. 3220 (E) dt 05.09.2019 |
| **Recommended region** | West Bengal |
| **Suitable season** | Rabi |
| **Duration** | 110-115 days |
| **Salient features** | High yield, yellow seeded, dark green leaves, prominent constriction on siliqua, more oil content and large seeds |
| **Collaborating Institute** | Bidhan Chandra Krishi Viswavidyalaya, West Bengal |

# Mustard

## TPM-1

# Mustard (राई)



| | |
|---|---|
| **Botanical name** | ***Brassica juncea*** |
| **Common names** | **Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive** |
| **Variety name** | **TPM-1** |
| **Pedigree** | **Mutant of Rai-5** |
| **Year of release** | **2007** |
| **Notification** | **SO No. 1703 (E) dt 05.10.2007** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Rabi** |
| **Duration** | **95-100 days** |
| **Salient features** | **High yield, yellow seeded with small leaf and powdery mildew tolerance** |
| **Collaborating Institute** | **Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra** |

# Mustard
## TM-2

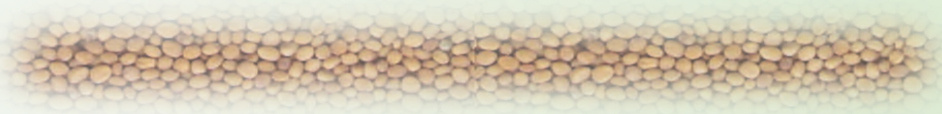
# Mustard (राई)

| | |
|---|---|
| **Botanical name** | *Brassica juncea* |
| **Common names** | Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive |
| **Variety name** | TM-2 |
| **Pedigree** | Mutant of RL-9 |
| **Year of release** | 1993 |
| **Notification** | SO No.615(E) dt 17.08.1993 |
| **Recommended region** | Assam |
| **Suitable season** | Rabi |
| **Duration** | 90-95 days |
| **Salient features** | Black seeded, high yielding (1300 kg/ha), appressed pods |
| **Collaborating Institute** | Assam Agricultural University, Jorhat, Assam |

# Mustard

## TM-4

# Mustard (राई)



| | |
|---|---|
| **Botanical name** | ***Brassica juncea*** |
| **Common names** | **Indian mustard, Rai, Kaduku, Sarson, Mohari, Sasive** |
| **Variety name** | **TM-4** |
| **Pedigree** | **Varuna x TM-1(TPM-1)** |
| **Year of release** | **1993** |
| **Notification** | **SO No.615 (E) dt 17.08.1993** |
| **Recommended region** | **Assam** |
| **Suitable season** | **Rabi** |
| **Duration** | **95-100 days** |
| **Salient features** | **Yellow seeded, high yielding (1470 kg/ha)** |
| **Collaborating Institute** | **Assam Agricultural University, Jorhat, Assam** |

# Sunflower
## TAS-82

# Sunflower (सूर्यमुखी)

| | |
|---|---|
| **Botanical name** | ***Helianthus annus*** |
| **Common names** | **Sunflower, Suryamukhi, Suryagandhi, Suryakanthi** |
| **Variety name** | **TAS-82** |
| **Pedigree** | **Mutant of variety 'Surya'** |
| **Year of release** | **2007** |
| **Notification** | **SO No 1703 (E) dt 05.10.2007** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif & Rabi** |
| **Duration** | **Mid late (90-100 days)** |
| **Salient features** | **Black seed coat, tolerant to sunflower necrosis disease, suitable for low rainfall condition** |
| **Collaborating Institute** | **Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra** |

# Mungbean
## TRCRM-147

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TRCRM-147 |
| **Pedigree** | TM-98-80 x SML-668 |
| **Year of release** | 2023 |
| **Notification** | SO No. 1056 (E) dt 06.03.2023 |
| **Recommended region** | Karnataka |
| **Suitable season** | Summer |
| **Duration** | 60-65 days |
| **Salient features** | Resistant to yellow mosaic disease, large seed size, high yielding & suitable for summer |
| **Collaborating Institute** | University of Agricultural Sciences, Raichur, Karnataka |

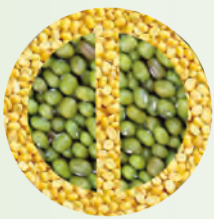
# Mungbean
## TM-2000-2 (Pairy Mung)

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TM-2000-2 (Pairy Mung) |
| **Pedigree** | TARM-1 x JL-781 |
| **Year of release** | 2010 |
| **Notification** | SO No 211(E) dt 29.01.2010 |
| **Recommended region** | Chhattisgarh |
| **Suitable season** | Rabi & semi-irrigated rice fallows |
| **Duration** | 65-70 days |
| **Salient features** | Resistant to powdery mildew, synchronous podding & maturity, suitable for rice fallows, medium bold seeds, high yielding (950 kg/ha) |
| **Collaborating Institute** | Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh |

# Mungbean

## TM-96-2 (Trombay Pesara)



# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TM-96-2 (Trombay Pesara) |
| **Pedigree** | Kopergaon x TARM-2 |
| **Year of release** | 2007 |
| **Notification** | SO No. 1178(E) dt 20.07.2007 |
| **Recommended region** | Andhra Pradesh |
| **Suitable season** | Rabi & summer |
| **Duration** | 65-70 days |
| **Salient features** | High yielding (1020 kg/ha under rice fallow conditions), resistant to powdery mildew, large seed size, suitable for rice fallows |
| **Collaborating Institute** | Acharya N.G. Ranga Agricultural University, Hyderabad, Andhra Pradesh |

# Mungbean

## TJM-3

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | ***Vigna radiata*** |
| **Common names** | **Mungbean, Mung, Mooga, Pasipayaru, Hesaru** |
| **Variety name** | **TJM-3** |
| **Pedigree** | **Kopergaon x TARM-1** |
| **Year of release** | **2007** |
| **Notification** | **SO No. 1178 (E) dt 20.07.2007** |
| **Recommended region** | **Madhya Pradesh** |
| **Suitable season** | **Kharif & summer** |
| **Duration** | **60-65 days** |
| **Salient features** | **High yielding (950 kg/ha), resistant to powdery mildew, yellow mosaic virus and *Rhizoctonia* root-rot diseases** |
| **Collaborating Institute** | **Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh** |

# Mungbean

## TMB-37

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TMB-37 |
| **Pedigree** | Kopergaon x TARM-2 |
| **Year of release** | 2005 |
| **Notification** | SO No. 1177 (E) dt 25.08.2005 |
| **Recommended region** | Eastern UP, Bihar, Jharkhand, West Bengal, Assam, Punjab |
| **Suitable season** | Summer |
| **Duration** | 60-65 days |
| **Salient features** | High yielding (1100 kg/ ha), moderately resistant to yellow mosaic virus |
| **Collaborating Institute** | ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh |

# Mungbean
## TARM-18

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TARM-18 |
| **Pedigree** | PDM-54 x TARM-2 |
| **Year of release** | 1997 |
| **Notification** | SO No. 360 (E) dt 01.05.1997 |
| **Recommended region** | Maharashtra |
| **Suitable season** | Kharif |
| **Duration** | 65 days |
| **Salient features** | High yielding (1065 kg/ha), early maturing, resistant to powdery mildew disease |
| **Collaborating Institute** | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra |

# Mungbean
## TARM-1

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TARM-1 |
| **Pedigree** | RUM-5 x TPM-1 |
| **Year of release** | 1997 |
| **Notification** | SO No. 360 (E) dt 01.05.1997 |
| **Recommended region** | Karnataka, Tamil Nadu, Andhra Pradesh, Kerala, Odisha, Madhya Pradesh, Gujarat and Maharashtra |
| **Suitable season** | Rabi |
| **Duration** | 75-80 days |
| **Salient features** | High yielding (1204 kg/ ha), resistant to powdery mildew, tolerant to yellow mosaic virus disease |
| **Collaborating Institutes** | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra |
| | ICAR-Indian Insitute of Pulses Research, Kanpur, Uttar Pradesh |

# Mungbean
## TARM-2

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TARM-2 |
| **Pedigree** | RUM-5 x TPM-1 |
| **Year of release** | 1994 |
| **Notification** | SO No. 636(E) dt 02.09.1994 |
| **Recommended region** | Maharashtra |
| **Suitable season** | Rabi |
| **Duration** | 75-80 days |
| **Salient features** | High yielding (1342 kg/ha), resistant to powdery mildew, tolerant to yellow mosaic virus disease |
| **Collaborating Institute** | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra |

# Mungbean
## TAP-7

# Mungbean (मूँग)

| | |
|---|---|
| **Botanical name** | *Vigna radiata* |
| **Common names** | Mungbean, Mung, Mooga, Pasipayaru, Hesaru |
| **Variety name** | TAP-7 |
| **Pedigree** | Mutant of S-8 |
| **Year of release** | 1983 (MS), 1987 (Karnataka) |
| **Notification** | SO No. 2 (E) dt 03.01.1983 |
| **Recommended region** | Maharashtra, Karnataka |
| **Suitable season** | Kharif |
| **Duration** | 63-65 days |
| **Salient features** | Early maturing, high yielding (971 kg/ha), tolerant to powdery mildew disease |
| **Collaborating Institute** | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra |

# Urdbean
## TJU-130

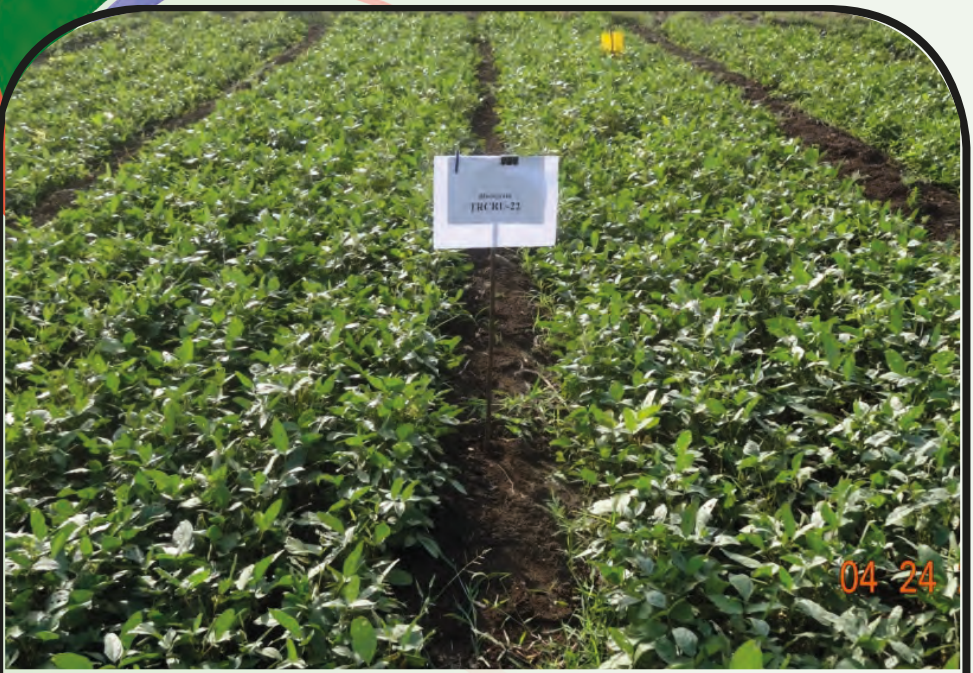
# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TJU-130 |
| **Pedigree** | KU96-3 x RIL-68 |
| **Year of release** | 2023 |
| **Notification** | SO No. 4222 (E) dt 25.09.2023 |
| **Recommended region** | Madhya Pradesh |
| **Suitable season** | Summer |
| **Duration** | 65-70 days |
| **Salient features** | Resistant to multiple diseases (yellow mosaic, anthracnose and powdery mildew) |
| **Collaborating Institute** | Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh |

# Urdbean
## TJU-339

# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TJU-339 |
| **Pedigree** | TAU-1 x KU-96-3 |
| **Year of release** | 2023 |
| **Notification** | SO No. 4222 (E) dt 25.09.2023 |
| **Recommended region** | Madhya Pradesh |
| **Suitable season** | Summer |
| **Duration** | 65-70 days |
| **Salient features** | Resistant to multiple diseases (yellow mosaic, anthracnose and powdery mildew) |
| **Collaborating Institute** | Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Madhya Pradesh |




# Urdbean
# TRCRU-22

# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TRCRU-22 |
| **Pedigree** | TAU-1 x KU-96-3 |
| **Year of release** | 2023 |
| **Notification** | SO No. 1056 (E) dt 06.03.2023 |
| **Recommended region** | Karnataka |
| **Suitable season** | Summer |
| **Duration** | 70-75 days |
| **Salient features** | Resistant to yellow mosaic disease, medium large seeds, high yielding |
| **Collaborating Institute** | University of Agricultural Sciences, Raichur, Karnataka |

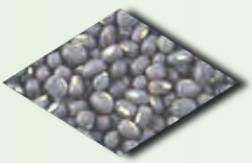
# Urdbean

## TU-40

# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TU-40 |
| **Pedigree** | TU-94-2 x *V. mungo* var *silvestris* |
| **Year of release** | 2013 |
| **Notification** | SO No. 312 (E) dt 01.02.2013 |
| **Recommended region** | Tamil Nadu, Andhra Pradesh, Karnataka and Odisha |
| **Suitable season** | Rabi |
| **Duration** | 75 days |
| **Salient features** | Resistant to yellow mosaic virus and powdery mildew diseases, high yielding (903 kg/ha), suitable for rice fallows |
| **Collaborating Institute** | ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh |

# Urdbean
## TU-94-2



# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TU-94-2 |
| **Pedigree** | TPU-3 (mutant) x TAU-5 |
| **Year of release** | 1999 |
| **Notification** | SO No. 425 (E) dt 08.06.1999 |
| **Recommended region** | Andhra Pradesh, Kerala, Karnataka, Tamil Nadu |
| **Suitable season** | Kharif, Summer |
| **Duration** | 70 days |
| **Salient features** | Resistant to yellow mosaic virus disease and high yielding (950 kg/ha) |
| **Collaborating Institute** | ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh |

# Urdbean

## TAU-2

# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TAU-2 |
| **Pedigree** | U-196 (mutant) x T-9 |
| **Year of release** | 1993 |
| **Notification** | SO No. 615 (E) dt 17.08.1993 |
| **Recommended region** | Maharashtra |
| **Suitable season** | Kharif, Summer |
| **Duration** | 60-65 days |
| **Salient features** | High yielding (950 kg/ha), resistant to powdery mildew, yellow mosaic virus and *Rhizoctonia* root rot diseases |
| **Collaborating Institute** | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra |

# Urdbean

## TPU-4

# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TPU-4 |
| **Pedigree** | U-201 (mutant) x T-9 |
| **Year of release** | 1992 |
| **Notification** | SO No. 814 (E) dt 04.11.1992 |
| **Recommended region** | Madhya Pradesh, Gujarat, Maharashtra |
| **Suitable season** | Kharif |
| **Duration** | 72-75 days |
| **Salient features** | High yielding (872 kg/ha), large seed size |
| **Collaborating Institutes** | Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra |
| | ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh |

# Urdbean

## TAU-1

# Urdbean (उड़द)

| | |
|---|---|
| **Botanical name** | *Vigna mungo* |
| **Common names** | Blackgram, Urid, Urdbean, Ulunthu, Uddu |
| **Variety name** | TAU-1 |
| **Pedigree** | U-196 (mutant) x T-9 |
| **Year of release** | 1985 (MS), 1996 (Karnataka) |
| **Notification** | SO No. 540 (E) dt 24.07.1985 |
| **Recommended region** | Maharashtra, Karnataka |
| **Suitable season** | Kharif |
| **Duration** | 68-75 days |
| **Salient features** | High yielding (1350 kg/ha), large seed size, wider adaptability |
| **Collaborating Institute** | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra |

# Pigeonpea
## PKV- TARA

# Pigeonpea (अरहर)

| | |
|---|---|
| **Botanical name** | ***Cajanus cajan*** |
| **Common names** | **Pigeonpea, Redgram, Tur, Turia, Thuvarai, Togari** |
| **Variety name** | **PKV-TARA** |
| **Pedigree** | **ICPL84008 x TT-6** |
| **Year of release** | **2013** |
| **Notification** | **SO No. 2817 (E) dt 19.09.2013** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif** |
| **Duration** | **155-190 days** |
| **Salient features** | **High yielding (1900 kg/ha), brownish- red medium seeds (9.5 g /100 seed wt), tolerant to *Fusarium* wilt & sterility Mosaic diseases** |
| **Collaborating Institute** | **Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra** |


# Pigeonpea
## TJT-501

# Pigeonpea (अरहर)

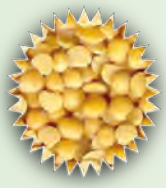
| | |
|---|---|
| **Botanical name** | *Cajanus cajan* |
| **Common names** | Pigeonpea, Redgram, Tur, Turia, Thuvarai, Togari |
| **Variety name** | TJT-501 |
| **Pedigree** | ICPL84008 x TT-6 |
| **Year of release** | 2009 |
| **Notification** | SO No. 2187 (E) dt 27.08.2009 |
| **Recommended region** | Central Zone (Maharashtra, Madhya Pradesh, Gujarat, Chhattisgarh) |
| **Suitable season** | Kharif |
| **Duration** | 145-155 days |
| **Salient features** | High yielding (1750 kg/ha), brown medium seeds, resistant to *Fusarium* wilt & tolerant to *Phytophthora* blight |
| **Collaborating Institutes** | Jawaharlal Nehru Krishi Vishwa Vidyalaya, Khargone, Madhya Pradesh |
| | ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh |

# Pigeonpea
## TT-401

# Pigeonpea (अरहर)

| | |
|---|---|
| **Botanical name** | ***Cajanus cajan*** |
| **Common names** | **Pigeonpea, Redgram, Tur, Turia, Thuvarai, Togari** |
| **Variety name** | **TT-401** |
| **Pedigree** | **ICPL84008 x TT-6** |
| **Year of release** | **2007** |
| **Notification** | **SO No.1703 (E) dt 05.10.2007** |
| **Recommended region** | **Central Zone (Maharashtra, Madhya Pradesh, Gujarat,Chhattisgarh)** |
| **Suitable season** | **Kharif** |
| **Duration** | **150 days** |
| **Salient features** | **High yielding (1570 kg/ha), medium brown seeds, tolerant to *Fusarium* wilt disease, pod borer and pod fly insect pests** |
| **Collaborating Institute** | **ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh** |

# Pigeonpea
## TAT-10



# Pigeonpea (अरहर)

| | |
|---|---|
| **Botanical name** | ***Cajanus cajan*** |
| **Common names** | **Pigeonpea, Redgram, Tur, Turia, Thuvarai, Togari** |
| **Variety name** | **TAT-10** |
| **Pedigree** | **TT-2 (mutant) x TT-8 (mutant)** |
| **Year of release** | **1985** |
| **Notification** | **SO No. 295(E) dt 09.04.1985** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif** |
| **Duration** | **115 days** |
| **Salient features** | **Erect plant type and extra early maturity, yield: 1000 - 1200 kg/ha** |
| **Collaborating Institute** | **Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra** |

# Pigeonpea

## TT-6

# Pigeonpea (अरहर)

| | |
|---|---|
| **Botanical name** | ***Cajanus cajan*** |
| **Common names** | **Pigeonpea, Redgram, Tur, Turia, Thuvarai, Togari** |
| **Variety name** | **TT-6 (Trombay Vishakha-1)** |
| **Pedigree** | **Mutant of T-21** |
| **Year of release** | **1985** |
| **Notification** | **SO No. 295 (E) dt 09.04.1985** |
| **Recommended region** | **Maharashtra, Madhya Pradesh, Gujarat, Andhra Pradesh, Karnataka, Kerala** |
| **Suitable season** | **Kharif** |
| **Duration** | **120 days** |
| **Salient features** | **Erect plant type, large seed size and extra early maturity** |
| **Collaborating Institute** | **ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh** |

# Cowpea
## TC-901

# Cowpea (चौली)

| | |
|---|---|
| **Botanical name** | ***Vigna unguiculata*** |
| **Common names** | **Cowpea, Chauli, Karamani, Yard Long Bean, Alasandi** |
| **Variety name** | **TC-901** |
| **Pedigree** | **Mutant of EC394763** |
| **Year of release** | **2018** |
| **Notification** | **SO No. 6318(E) dt 26.12.2018** |
| **Recommended region** | **Gujarat, Rajasthan, Madhya Pradesh, West Bengal, Maharashtra and Uttarakhand** |
| **Suitable season** | **Summer** |
| **Duration** | **69-75 days** |
| **Salient features** | **Early and synchronous maturity, tolerant to yellow mosaic and root-rot diseases, high yielding (1000-1200 kg/ha)** |
| **Collaborating Institute** | **ICAR-Indian Institute of Pulses Research, Kanpur, Uttar Pradesh** |

# Cowpea
## TRC-77-4
### (Khalleshwari)

# Cowpea (चौली)

| | |
|---|---|
| **Botanical name** | *Vigna unguiculata* |
| **Common names** | Cowpea, Chauli, Karamani, Yard Long Bean, Alasandi |
| **Variety name** | TRC-77-4 (Khalleshwari) |
| **Pedigree** | Mutant of V-130 |
| **Year of release** | 2007 |
| **Notification** | SO No. 1178 (E) dt 20.07.2007 |
| **Recommended region** | Chhattisgarh |
| **Suitable season** | Kharif and Rabi rice fallows |
| **Duration** | 75-80 days |
| **Salient features** | Suitable for rice fallows, dwarf plant type, medium large seeds, (9.4 g/100 seed wt), dual purpose, high yielding |
| **Collaborating Institute** | Indira Gandhi Krishi Vishwa Vidyalaya, Raipur, Chhattisgarh |


# Rice
# TCVM

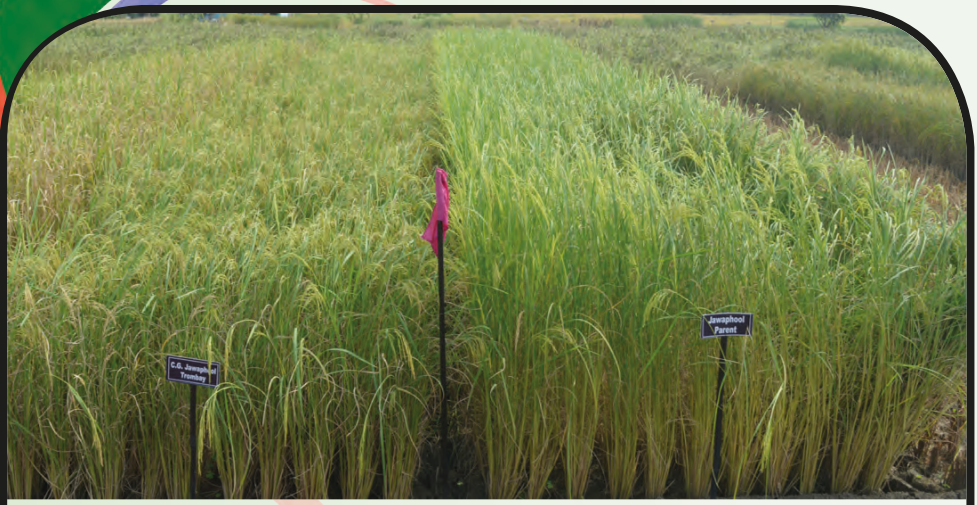
# Rice (चावल)

| | |
|---|---|
| **Botanical name** | ***Oryza sativa*** |
| **Common names** | **Rice, Paddy, Arisi, Bhat, Chaval, Bhatta** |
| **Variety name** | **TCVM** |
| **Pedigree** | **Mutant of Vishnubhog** |
| **Year of release** | **2021** |
| **Notification** | **SO No. 8 (E) dt 24.12.2021** |
| **Recommended region** | **Chhattisgarh** |
| **Suitable season** | **Kharif** |
| **Duration** | **120-125 days** |
| **Salient features** | **High yielding (4.0-4.5t/ha), aromatic short grain, semi-dwarf, suitable for *kheer* or *pulav* making** |
| **Collaborating institute** | **Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh** |


# Rice
## TCSM

# Rice (चावल)

| | |
|---|---|
| **Botanical name** | ***Oryza sativa*** |
| **Common names** | **Rice, Paddy, Arisi, Bhat, Chaval, Bhatta** |
| **Variety name** | **TCSM** |
| **Pedigree** | **Mutant of Sonagathi** |
| **Year of release** | **2021** |
| **Notification** | **SO No. 8 (E) dt 24.12.2021** |
| **Recommended region** | **Chhattisgarh** |
| **Suitable season** | **Kharif** |
| **Duration** | **135-140 days** |
| **Salient features** | **High yielding (6.0-6.5t/ha), semi-dwarf, late maturity, coarse grain (suitable for rainfed farming)** |
| **Collaborating Institute** | **Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh** |




# Rice
# CGJT

# Rice (चावल)

| | |
|---|---|
| **Botanical name** | ***Oryza sativa*** |
| **Common names** | **Rice, Paddy, Arisi, Bhat, Chaval, Bhatta** |
| **Variety name** | **CGJT** |
| **Pedigree** | **Mutant of Jawaphool (Local landrace of Chhattisgarh)** |
| **Year of release** | **2021** |
| **Notification** | **SO No. 500 (E) dt 29.01.2021** |
| **Recommended region** | **Chhattisgarh** |
| **Suitable season** | **Kharif** |
| **Duration** | **130-135 days** |
| **Salient features** | **Aromatic short slender grain, semi-tall, suitable for *kheer* making** |
| **Collaborating Institute** | **Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh** |


# Rice
# Vikram-TCR

# Rice (चावल)

| | |
|---|---|
| **Botanical name** | ***Oryza sativa*** |
| **Common names** | **Rice, Paddy, Arisi, Bhat, Chaval, Bhatta** |
| **Variety name** | **Vikram-TCR** |
| **Pedigree** | **Mutant of Safri-17 (landrace of Chhattisgarh)** |
| **Year of release** | **2021** |
| **Notification** | **SO No. 500 (E) dt 29.01.2021** |
| **Recommended region** | **Chhattisgarh** |
| **Suitable season** | **Kharif** |
| **Duration** | **118-123 days** |
| **Salient features** | **Semi-dwarf, lodging resistant, drought tolerant, high yielding (6.0 t/ha), suitable for puffed rice (*Murmura*)** |
| **Collaborating Institute** | **Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh** |

# Rice
# TKR-Kolam

# Rice (चावल)

| | |
|---|---|
| **Botanical name** | ***Oryza sativa*** |
| **Common names** | **Rice, Paddy, Arisi, Bhat, Chaval, Bhatta** |
| **Variety name** | **TKR-Kolam** |
| **Pedigree** | **PB1 mutant x PB1** |
| **Year of release** | **2020** |
| **Notification** | **SO No. 3482 (E) dt 07.10.2020** |
| **Recommended region** | **Maharashtra** |
| **Suitable season** | **Kharif** |
| **Duration** | **130-135 days** |
| **Salient features** | **Semi-dwarf, very fine Kolam type grain (test weight 11g), high yielding (4.0-4.5 t/ha), high milling recovery (74%)** |
| **Collaborating Institute** | **Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Maharashtra** |


# Rice
# TCDM-1

# Rice (चावल)

| | |
|---|---|
| **Botanical name** | ***Oryza sativa*** |
| **Common names** | **Rice, Paddy, Arisi, Bhat, Chaval, Bhatta** |
| **Variety name** | **TCDM-1** |
| **Pedigree** | **Mutant of Mai Dubraj** |
| **Year of release** | **2019** |
| **Notification** | **SO No. 1498 (E) dt 01.04. 2019** |
| **Recommended region** | **Chhattisgarh** |
| **Suitable season** | **Kharif** |
| **Duration** | **130-135 days** |
| **Salient features** | **Semi-dwarf, lodging resistant, aromatic grain, high yielding (4.5-4.7 t/ha) and high milling recovery (70%)** |
| **Collaborating Institute** | **Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh** |

# Rice
## Hari

# Rice (चावल)

| | |
|---|---|
| **Botanical name** | ***Oryza sativa*** |
| **Common names** | **Rice, Paddy, Arisi, Bhat, Chaval, Bhatta** |
| **Variety name** | **Hari** |
| **Pedigree** | **IR-8 x TR-5** |
| **Year of release** | **1988** |
| **Notification** | **SO No. 1135 (E) dt 01.12.1988** |
| **Recommended region** | **Andhra Pradesh** |
| **Suitable season** | **Kharif** |
| **Duration** | **135-140 days** |
| **Salient features** | **High yielding (6000 – 6500kg/ ha), long slender grains, semi-dwarf (93 cm), non-lodging type** |
| **Collaborating Institute** | **Acharya N. G. Ranga Agricultural University, Hyderabad, Andhra Pradesh** |

# Hurda Sorghum
# TAKPS-5
## (Suruchi)

# Sorghum (ज्वार)

| | |
|---|---|
| **Botanical name** | *Sorghum bicolor* |
| **Common names** | Sorghum, Jowar, Jwari, Cholam, Jonnalu, Jola, Milo, Egyptian millet |
| **Variety name** | TAKPS-5 (Suruchi) |
| **Pedigree** | Mutant of GBM-22-6-1 |
| **Year of release** | 2023 |
| **Notification** | SO No. 1056 (E) dt 06.03.2023 |
| **Recommended region** | Maharashtra |
| **Suitable season** | Rabi |
| **Duration** | 90 days |
| **Salient features** | Hurda variety, early maturing, non-lodging, compact panicles, spongy and sweet grains with better flavor and shelf life |
| **Collaborating Institute** | Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra |

# Grain Sorghum
# TRJP 1-5
# (SPV-2538)

# Sorghum (ज्वार)

| | |
|---|---|
| **Botanical name** | *Sorghum bicolor* |
| **Common names** | Sorghum, Jowar, Jwari, Cholam, Jonnalu, Jola, Milo, Egyptian millet |
| **Variety name** | TRJP 1-5 (SPV-2538) |
| **Pedigree** | Mutant of JP-1-5 |
| **Year of release** | 2023 |
| **Notification** | SO No. 1056 (E) dt 06.03.2023 |
| **Recommended region** | Karnataka |
| **Suitable season** | Rabi |
| **Duration** | 110-115 days |
| **Salient features** | Synchronized flowering, large seeds, good roti making quality, medium duration, suitable for deep black soils |
| **Collaborating Institute** | University of Agricultural Sciences, Raichur, Karnataka |

# Jute

## TKJ-40

**(Mahadev)**

# Jute (पटसन)

| | |
|---|---|
| **Botanical name** | *Corchorus capsularis* |
| **Common names** | Jute, Sanal, Patsan, Senabu |
| **Variety name** | TKJ-40 (Mahadev) |
| **Pedigree** | Selection from a cross between mutants of JRO 632 |
| **Year of release** | 1983 |
| **Notification** | SO No. 449 (E) dt 08.07.1983 |
| **Recommended region** | Odisha |
| **Suitable season** | Late summer (15th to 30th of April) |
| **Duration** | 125-130 days |
| **Salient features** | Photoperiod sensitive, high fibre yield |
| **Collaborating Institute** | Jute Research Station,Janjanga, Kendrapara, Odisha |

# Novel Trombay Mutants Registered with National Bureau of Plant Genetic Resources, New Delhi

| Crop/Mutant | Character | Year | INGR. No. |
|---|---|---|---|
| **Sorghum** | | | |
| TAKPS-3 | Semicompact, threshable hurda with better taste and flavor | 2023 | 23039 |
| TAKPS-1 | High yielding hurda with better sucrose content and organoleptic properties | 2023 | 23038 |
| **Wheat** | | | |
| TAW-33 | High seed hardness index | 2021 | 21201 |
| **Groundnut** | | | |
| TGM-51 | Funnel leaflet, dwarf plant type | 2013 | 13026 |
| TGM-38 | Sub-orbicular leaflet, erect, compact & dwarf plant type | 2013 | 13025 |
| TGM-167 | Gibberellin insensitive dominant dwarf | 2013 | 13011 |
| TGM-112 | White to light orange flower colour mutation | 2011 | 11058 |
| TG-18A | Large pod and seed | 2007 | 07032 |
| Suppressed branch | Suppressed primary branches and large basal leaflets with gradual reduction | 2004 | 04098 |
| Imparipinnate leaf | Imparipinnate leaves with small leaflets | 2004 | 04097 |
| Small leaf | Dwarf with small leaf size | 2004 | 04041 |
| TGE 1 | Early (95 days), foliaceous stipule & high shelling outturn (80%) | 2004 | 04040 |
| TG-18AM | Disease lesion mimic leaf trait | 2004 | 04039 |
| **Wild Blackgram** | | | |
| Trombay wild urid | Source of resistance to bruchid | 2010 | 10133 |
| **Sesame** | | | |
| N-29 | Polypetalous corolla | 2007 | 07030 |
| N-129 | Mutant with greater initial seedling vigour and tallness | 2007 | 07029 |
| NM-58 | Non-lodging due to stiff stem | 2005 | 05018 |
| **Sunflower** | | | |
| Fasciation | Fasciation and more leaves | 2004 | 04100 |
| **Sesbania** | | | |
| TSR-1 | Photoperiod insensitive mutant with long vegetative growth (flowers after 60 days of vegetative growth) | 2001 | 01014 |

# Index


*C*

Cowpea: 103, 105
- Khalleshwari: 105
- TC-901: 103
- TRC-77-4: 105

*G*

Groundnut: 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33
- Bheema: 5
- GG-37: 3
- RARST-1: 5
- Somnath: 27
- TAG-24: 25
- TAG-73: 3
- TBG-39: 7
- TDG-39: 7
- TG-1: 33
- TG-3: 29
- TG-17: 31
- TG-22: 23
- TG-26: 19
- TG-37A: 15
- TG-38: 13
- TG-47: 5
- TG-51: 9
- TGS-1: 27
- TKG-19A: 21
- TLG-45: 11
- TPG-41: 17
- Vikram: 33

*J*

Jute: 125
- Mahadev: 125
- TKJ-40: 125

*L*

Linseed: 39
- TL-99: 39

*M*

Mungbean: 60, 62, 64, 66, 68, 70, 72, 74, 76
- Pairy Mung: 61
- TAP-7: 75
- TARM-1: 71
- TARM-2: 73
- TARM-18: 69
- TJM-3: 65
- TM-96-2: 63
- TM-2000-2: 61
- TMB-37: 67
- TRCRM-147: 59
- Trombay Pe-sara: 63

Mustard: 41, 43, 45, 47, 49, 51, 53, 55
- BBM-1: 45
- TAM-108-1: 47
- TBM-143: 41
- TBM-204: 49
- THPM-1: 43
- TM-2: 53
- TM-4: 55
- TPM-1: 51

*P*

Pigeonpea: 94, 96, 98, 100, 102
- PKV- TARA: 93
- TAT-10: 99
- TJT-501: 95
- TT-6: 101
- TT-401: 97

*R*

Registered novel Trombay mutants: 127

Rice: 107, 109, 111, 113, 115, 117, 119
- CGJT: 111
- Hari: 119
- TCDM-1: 117
- TCSM: 109
- TCVM: 107
- TKR-Kolam: 115
- Vikram-TCR: 113

*S*

Sorghum: 122, 124
- TAKPS-5: 121
- TRJP-1-5: 123

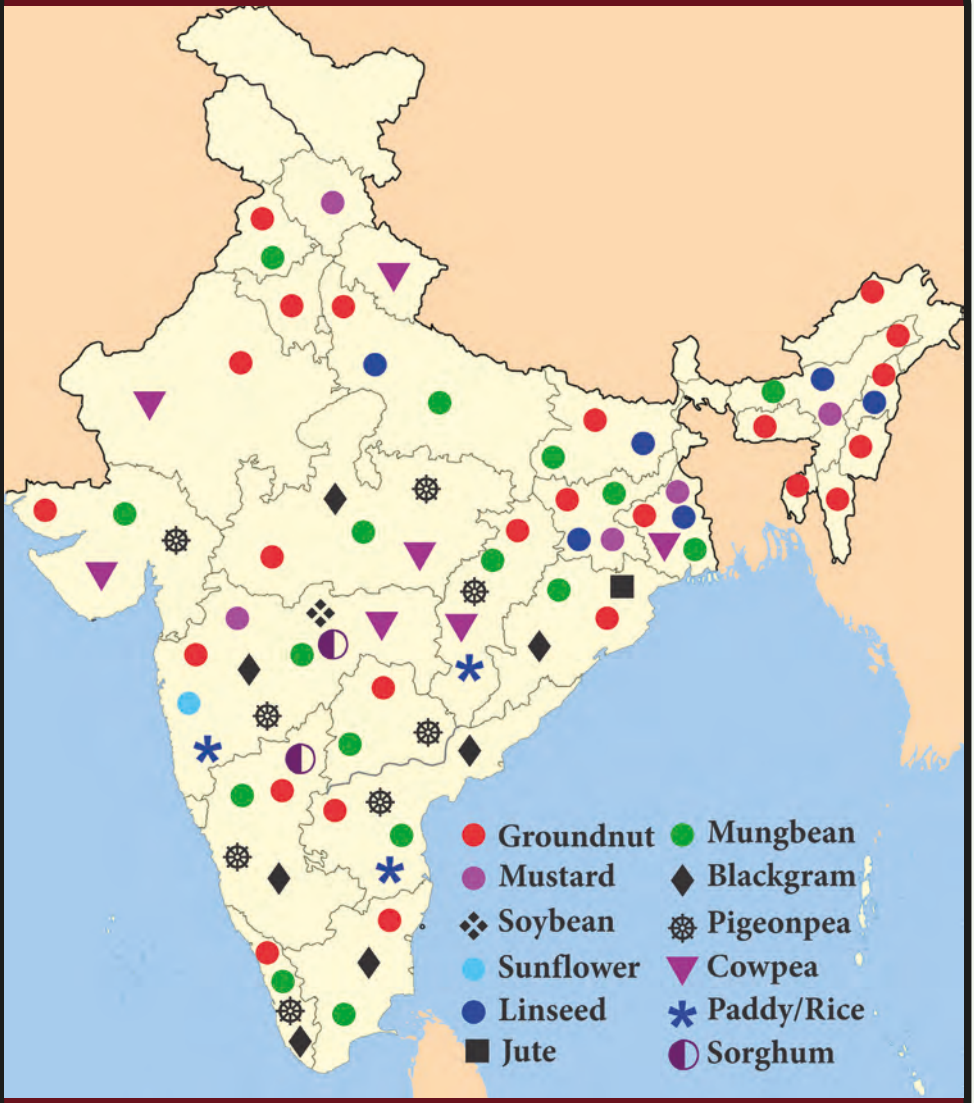
Soybean: 35, 37
- TAMS-38: 37
- TAMS-98-21: 35

Sunflower: 58
- TAS-82: 57

*U*

Urdbean: 78, 80, 82, 84, 86, 88, 90, 92
- TAU-1: 91
- TAU-2: 87
- TJU-130: 77
- TJU-339: 79
- TPU-4: 89
- TRCRU-22: 81
- TU-40: 83
- TU-94-2: 85

# Pan India Release of Trombay Crop Varieties




**For more information, please contact:**

**Head, Nuclear Agriculture and Biotechnology Division, Bhabha Atomic Research Centre, Trombay, Mumbai 400 085, Maharashtra, email: panabtd@barc.gov.in**