

TECHNOLOGY INVENTORY - I

VARIETIES



Compiled by

S. V. Sarode
A. H. Nagone



DIRECTORATE OF RESEARCH

Dr. Panjabrao Deshmukh Krishi Vidyapeeth,

P.O. Krishinagar, Akola 444 104 (M.S.)

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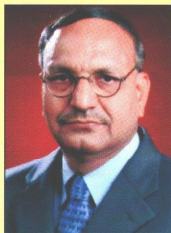
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Dr. V.M. Mayande

Vice Chancellor

Dr. PDKV, Akola

FOREWORD

Food security is one of the major concern with increasing population pressure on land and changing global scenario. Abiotic and biotic stress condition due to climatic variations is major challenge to plant breeder to sustain the productivity potential of crop varieties. Increased crop yields, pest resistance and tolerance of environmental stresses have been the targets of plant breeders during the last few decades. There is also progress towards improving food quality and quantity by improving the nutritional benefits of food crops. Plant breeders and geneticists have developed a large number of improved crop varieties that have played a pivotal role in enhancing crop production and productivity which made the nation food secured. Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola has been at the forefront to breed new varieties of the crops to suit local and national conditions.

The University has developed over 100 varieties and hybrids of different crops, besides identified 40 varieties since its inception. Most crop varieties developed have wider adaptability and are nationally recognized. Among the significant contributions are : cotton (PKV Hy-2, PKV Rajat), sorghum (CSH-14, CSH-19R, AKSV-13R) Pulses (Pigeonpea : TAT-10, PKV Tara), (Green gram : TARM-2, AKAM-9911), (Black gram : TAU-1, TAU-2, PKVU-15), (Chickpea : AKG-46, Gulak-1, PKV Kabuli-2, Jaki-9218, PKV kabuli - 4) and oilseeds : (Groundnut : TAG-24, AK-303).

This documented pedigree of modern crop varieties is intended to give a general guide to depict the crop varietal exploration and expeditions of the University. It provides information on varietal improvement research with crop variety performance and its important agronomic characteristics that can help to choose varieties that are best suited to particular farming situation. Nevertheless, it is continuous process and development of further new varieties of crops would be essential to suit newer stress ecologies, nutritionally sound and market savvy situations.

I am sure that plant breeding scientists of this University will continue to strive hard in this direction for the benefit of the farming community and other beneficiaries in the years to come.

I deeply appreciate the concerted efforts put in by Dr. S.V. Sarode, Director of Research and his team in compiling this important publication. I am sure that the technology inventory of crop varieties will definitely provide an useful information to the breeders, scientists, students, farmers and specially to KVK's across the country.


V.M. Mayande



Dr. S.V. Sarode

Director of Research
Dr. PDKV, Akola

PREFACE

Crop variety becomes an important factor in enhancing the productivity of crops. Agricultural research system has been highly successful in producing crop varieties with traits desired by farmers, such as higher yield and greater tolerance of poor growing conditions. Dr. Panjabrao Deshmukh Krishi Vidyapeeth has been involved in crop improvement research since its inception. In essentiality for all the major crops of the region namely cotton, sorghum, pulses and oilseeds a number of valuable varieties have been created hitherto that are highly productive as well received by the farmers of the region especially.

This document reports complied information on the field and horticultural crop varieties developed by the scientists of this university from time to time in the context of farming and scientific ranges for the benefit of the farming community and other beneficiaries to realize more benefits. The outcome presented herein is essentially due to the painstaking efforts of all the collaborating scientists. While soliciting their continued cooperation, I thank them individually. It is a matter of great pride and appreciation that scientists of the university are continually putting their efforts in breeding newer varieties each year incorporating agriculturally valuable characteristics suiting the demanding preferences for the benefit of the farming community. With continued cooperation from the scientists, I am sure we can make further headway to enhance the production and productivity of crops in the region.

I take this opportunity to express heartiest gratitude to the Hon'ble Vice Chancellor Dr. V.M. Mayande for the keen interest and constant encouragement for this compendium. This publication would not have been possible at a short notice without the painstaking efforts of the staff members at the Directorate of Research. Lastly, I appreciate the efforts of all the contributors to this valuable publication.

S. V. Sarode

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Cotton

COTTON

AKH - 4



Name of Variety	: AKH-4
Year of Release	: 1975
Parent	: (B.22 x 13A) Derivative
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha region of Maharashtra state
Varietal Character	: Improved <i>G. arboreum</i> L. variety, leaf having 3 to 5 narrow lobes with accessories and light green in colour, flower yellow coloured with spot, medium size boll with three loculi, tapering towards end.
Plant height	: 75 - 100 cm
Duration	: Rainfed : 180-200 days
Maturity group	: Late
Reaction to major Pests/diseases	: Resistant to jassids and slightly susceptible to grey mildew
Spacing	: 60x15 cm
Plant Population	: 1,11,110/ha
Fertilizer dose	: Rainfed : 30:15:00 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: Rainfed : 12-15 kg/ha
Staple length	: Short
Fibre strength	: 46.1 g/tex
Spinability count	: 20's
100 Seed wt.	: 5-6 g
Boll weight	: 1.5 to 2.0 g
Ginning percentage	: 40
Average yield	: Rainfed 7-8 q/ha



COTTON

DHY - 286



Name of Variety	: DHY-286
Year of Release	: 1975
Parent	: (0394 x 6/6) x (0394 x CTI.8) derivatives
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha and Maharashtra
Varietal Character	: Improved <i>G. hirsutum</i> L. Variety, plant completely hairy with short dens hairs, leaf resembling upland in shape, thick, leathery and velvet, stem is redish green, leaf colour is yellowish green hairy, 5 broad lobe, medium whitish cream petal with milk white pollen grains, boll medium and roundish in shape, 3-4 locules.
Plant height	: 70 - 75 cm
Duration	: Rainfed : 200-210 days
Maturity group	: Late
Reaction to major	: Resistant to sucking pests and
Pests/ diseases	resistant to grey mildew
Spacing	: 60 x 30 cm
Plant population	: 55,550/ha
Fertilizer dose	: 50:25:00 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: 10-12 kg/ha
Staple length	: Medium
Fiber strength	: 47.0 g/tex
Spinability count	: 40's
100 Seed wt.	: 7-8 g
Boll weight	: 3.0 to 4.0 g
Ginning percentage	: 36
Average yield	: 8-10 q/ha



COTTON

PKV Hy - 2



Name of Variety	: PKV Hy-2 (AHH-468)
Year of Release	: 1981
Parents	: AK-32 x DHY 286-1
Breeding Method	: Heterosis breeding
Recommended ecology	: Suitable for kharif season under rainfed as well as irrigated condition
Varietal Characters	: Intra hirsutum conventional cotton hybrid, leaves with dense short hairs, prominent purple red eye spot on petal, light yellow flower
Plant height	: 105-115 cm
Duration	: 170-180 days
Maturity group	: Medium late
Reaction to major Pests/diseases	: Less susceptible to bacterial blight, moderately tolerant to jassids
Spacing	: 90x60 cm
Plant Population	: 18520 / ha
Fertilizer dose	: 50:25:25 NPK kg/ha. (50% dose of N at sowing and 50% after 30 DAS
Seed rate	: 3.5 - 4.0 kg/ha
Staple length	: 26.5 - 27.0 mm
Fibre strength	: 47.3 g/tex
Spinability count	: 40's
100 Seed wt.	: 9 - 10 g
Ginning percentage	: 35 - 36
Boll weight	: 3.5 - 4.0 g
Average yield	: Rainfed : 12-15 q/ha Irrigated : 15-20 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

AKA - 5



Name of Variety	: AKA-5
Year of Release	: 1981
Parent	: (H.253 x C.J.73) Derivative
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha region
Varietal Character	: Improved <i>G. arboreum</i> L. variety, erect, sympodial habit, leaves green, 5 deep cutted lobes with middle lobe long and narrow, flower medium to small with white petal having red spot, anthers yellow, leaves with accessories, calyx slightly cutted at apex, 3-4 locules, medium size boll tapering and pointed at end
Plant height	: 90 - 100 cm
Duration	: Rainfed : 170-180 days
Maturity group	: Medium late
Reaction to major Pests/diseases	: Resistant to jassids, susceptible to wilt, tolerant to dahiya, and anthracnose and resistant to black arm
Spacing	: 60 x 15 cm
Plant Population	: 1,11,110/ha
Fertilizer dose	: Rainfed : 30:15:00 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: Rain fed : 12-15 kg/ha
Staple length	: Short
Fibre strength	: 47.2 g/tex
Spinability count	: 30's
100 Seed wt.	: 3-4 g
Boll weight	: 1.5 to 2.0 g
Ginning percentage	: 39
Average yield	: Rainfed : 7-8 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

AKH - 081



Name of Variety	: AKH-081
Year of Release	: 1987
Parent	: Derivative from cross between G-47/4 x LL Pool (A segregate from <i>G. hirsutum</i> x <i>G. anomalum</i> cross)
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha under rainfed condition
Varietal Character	: Improved <i>G. hirsutum</i> L. Variety, dwarf plant type, leaf lobe prominently cut, flowers light yellow with yellow anthers and yellow pollen, bracts deeply serrated, bolls with three to four locules, tapering at both the ends, pointed and pitted
Plant height	: 60 - 70 cm
Duration	: Rainfed : 150-160 days
Maturity group	: Early
Reaction to major Pest/diseases	: Moderately tolerant to jassids, susceptible to boll worms, resistant to grey mildew, moderately susceptible to black arm and resistant to fusarium wilt.
Spacing	: 60 x 15 cm
Plant population	: 1,11,110/ha
Fertilizer dose	: 50:25:00 NPK kg/ha (50% N at sowing & 50% after 30 DAS)
Seed rate	: 15-20 kg/ha
Staple length	: Medium
Fiber strength	: 46.6 g/tex
Spinability count	: 40's
100 Seed wt.	: 7.0-8.0 g
Boll weight	: 3.0 to 4.0 g
Ginning percentage	: 38
Average yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

AKA - 8401



Name of Variety	: AKA-8401
Year of Release	: 1989
Parent	: (AKH-4 X <i>G. anomalam</i>) derivative
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha
Varietal Character	: Improved <i>G. arboreum</i> L. Variety, Leaf having intermediate lobe, flowers yellow with yellow anthers, bracts dented at tip, big size bolls of 3 - 4 locules
Plant height	: 100-125 cm
Duration	: Rainfed : 200-210 days
Maturity group	: Late
Reaction to major Pests/diseases	: Resistant to sucking pests, tolerant to bollworms and resistant to fusarium wilt
Spacing	: 60 x 30 cm
Plant Population	: 55,550/ha
Fertilizer dose	: 30:15:00 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: 9-10 kg/ha
Staple length	: Medium
Fibre strength	: 42.9 g/tex
Spinability count	: 40's
100 Seed wt.	: 6 - 7 g
Boll weight	: 2.5 to 3.0 g
Ginning percentage	: 38
Average yield	: Rainfed : 8-10 q/ha Irrigated : 15 - 20 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

PKV Hy - 3



Name of Variety	: PKV Hy - 3
Year of Release	: 1994
Parent	: CAK-32A x DHY-286-IR
Breeding Method	: Heterosis Breeding
Recommended ecology	: Kharif, recommended for Maharashtra, Andra Pradesh and Gujrat state
Varietal Character	: Intra hirsutum Cytoplasmic Male Sterility Based Cotton Hybrid, leaves having 3 to 5 broad lobed shallow cut, dense hairy leaves and having reddish green stem and petiole, flower sulphur colour with prominent purple red eye spot, anthers buff coloured, pollen buff, medium boll ovate, pointed at apex
Plant height	: 110 - 115 cm
Duration	: 165 - 175 days
Maturity group	: Medium
Reaction to major Pests/disease	: Moderately tolerant to jassids but moderately susceptible to bollworm, immune to grey mildew & moderately susceptible to bacterial blight
Spacing	: Rainfed - 90 x 60 cm Irrigated - 120 x 190 cm
Plant Population	: Rainfed - 18520/ha Irrigated - 9250/ha
Fertilizer dose	: Rainfed : 50:25:25 NPK kg/ha. Irrigated : 100:50:50 NPK kg/ha (50% dose of N at sowing & 50% after 30 DAS)
Seed rate	: 3.5 - 4.0 kg/ha
Staple length	: Medium
Fibre strength	: 47.0 g/tex
Spinability count	: 40's
100 Seed wt.	: 9 - 10 g
Boll weight	: 3.5 to 4.0 g
Ginning percentage	: 37 - 38
Average yield	: Rainfed 12-15 q/ha Irrigated 20-25 q/ha



COTTON

PKV Rajat



Name of Variety	: PKV Rajat
Year of Release	: 1994
Parent	: (AC-938 x SRT-1) x Derivatives <i>G. anothar</i>
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha better for saline soil
Varietal Character	: Improved <i>G. hirsutum</i> L. Variety, leaf with 3-5 broad lobes and slightly hairy, flower yellow with cream anthers, boll round pointed at tip, medium size boll of 4 locules, seed having semi-naked ness
Plant height	: 85-90 cm
Duration	: Rainfed : 170-180 days
Maturity group	: Medium late
Reaction to major pests /diseases	: Moderately resistant to jassids pests, boll worm and bacterial blight
Spacing	: 60x30 cm
Plant Population	: 55,550/ha
Fertilizer dose	: 50:25:00 NPK kg/ha (50% at sowing & 50% after 30 DAS)
Seed rate	: 10-12 kg/ha
Staple length	: Medium
Fiber strength	: 45.9 g/tex
Spinability count	: 40's
100 Seed wt.	: 7 - 8 g
Boll weight	: 3.5 to 4.0 g
Ginning percentage	: 39
Average yield	: 12-14 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

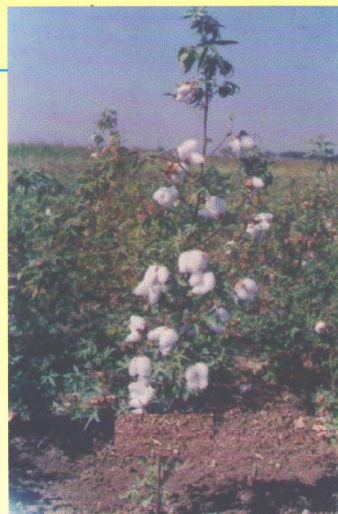
PKV Hy - 4



Name of Variety	: PKV Hy - 4
Year of Release	: 1996
Parent	: CAK-23A x AKH-07 R
Breeding Method	: Heterosis Breeding
Recommended ecology	: Kharif, recommended for Vidharbha
Varietal Character	: Intra hirsutum Cytoplasmic Male Sterility Based Cotton Hybrid, 3 to 5 broad lobed shallow cut, light hairy and dark green coloured leaves, having reddish light brown stem and petiole, flower pale yellow with yellow anthers, small in size, eye spot absent, boll medium size, oval shape and pointed at end, having 4-5 locules, plant habit open type.
Plant height	: 90-100 cm
Duration	: Rainfed : 160 - 170 days Irrigated : 170- 180 days
Maturity group	: Medium late
Reaction of major Pests/diseases	: Moderately resistant to jassids, less susceptible to pink bollworm, immune to grey mildew
Spacing	: Rainfed - 60 x 60 cm Irrigated - 120 x 90 cm
Plant Population	: Rainfed - 27,780/ha Irrigated - 9,250/ ha
Fertilizer dose	: Rainfed : 50:25:25 NPK kg/ha. Irrigated : 100:50:50 NPK kg/ha.(50% dose of N at sowing and 50% after 30 DAS
Seed rate	: Rainfed - 3.5-4.0 kg/ha Irrigated - 3.0 kg /ha
Staple length	: Long
Fibre strength	: 47.2 g/tex
Spinability count	: 50's
100 Seed wt.	: 9-10 g
Ginning percentage	: 36.5
Boll weight	: 4.0 to 4.5 g
Average yield	: Rainfed 12-15 q/ha Irrigated 25-30 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON AKA - 7



Name of Variety	: AKA-7
Year of Release	: 1998
Parent	: Selection (Petioleidy x Chandola) X AC 69
Breeding Method	: Pedigree
Recommended ecology	: Suitable for Vidarbha under rainfed condition
Varietal Character	: Improved <i>G. arboreum</i> L. variety, white flower, good boll opening, non shedding, leaf with 5 bulging narrow lobes without accessories.
Plant height	: 90-110cm
Duration	: 145-155 days
Maturity group	: Early
Reaction to major Pests/diseases	: Less susceptible to grey mildew, resistant to sucking pests and bacterial blight, tolerant to wilt
Spacing	: 60x15cm
Plant Population	: 1,11,110 /ha
Fertilizer dose	: 30:15:00 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: 12-15 kg/ha
Staple length	: 23.5-24 mm
Fibre strength	: 47.2 g/tex
Spinability count	: 20-30's
100 Seed wt.	: 5 - 6 g
Boll weight	: 2.5-3 g
Ginning percentage	: 41
Average yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

PKV Hy - 5



Name of Variety	: PKV Hy - 5 (CAHH -99)
Year of Release	: 2002
Parent	: CAK-053 A X AKH-02 R
Breeding Method	: Heterosis breeding
Recommended ecology	: Kharif, recommended for Maharashtra
Varietal Character	: Intra hirsutum Cytoplasmic Male Sterility Based Cotton Hybrid, 3 to 5 lobes prominently cut, less hairy and green coloured leaves having greenish light brown stem and petiole, flowers light yellow with pale yellow anthers and red pigmented filament, nectar is present, boll medium size, oval in shape and pointed at end, having 4 to 5 locules, plant habit open type with pyramid shape and close bearing on fruiting branches
Plant height	: 90 - 100 cm
Duration	: Rainfed : 150 -160 days Irrigated : 160 - 170 days.
Maturity group	: Medium
Reaction to major Pests/diseases	: Early Tolerant to jassids and white flies and less susceptible to bollworms. Moderately resistant to bacterial blight and resistant to grey mildew
Spacing	: Rainfed - 60 x 60 cm Irrigated - 120 x 90 cm
Plant Population	: Rainfed 27,780/ha Irrigated 9,250/ha
Fertilizer dose	: Rainfed : 50:25:25 NPK kg/ha. Irrigated : 100:50:50 NPK kg/ha.(50% dose of N at sowing and 50% after 30 DAS
Seed rate	: Rain fed : 3.0 to 3.5 kg/ha Irrigated : 2.5 kg/ha
Staple length	: Medium
Fibre strength	: 20.1 g/tex
Spinability count	: 50's
100 Seed wt.	: 8-9 g
Boll weight	: 3.5 to 4.0 g
Ginning percentage	: 36.0
Average yield	: Rainfed : 12-15 q/ha, Irrigated : 20-25 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

PKV DH - 1



Name of Variety	: PKV DH - 1
Year of Release	: 2002
Parent	: GAK-423 x HD-1 10-151
Breeding Method	: Heterosis breeding
Recommended ecology	: Kharif, recommended for Maharashtra
Varietal Character	: Intra hirsutum genetic male sterility based cotton hybrid, plant habit slightly bushy, leaf with 5 narrow lobes deep cutted, green, flowers yellow with brown petal spot and yellow anthers
Plant height	: 120-140 cm
Duration	: Rainfed : 180-190 days
Maturity group	: Medium late
Reaction to major Pests/diseases	: Resistant to sucking pests, susceptible to bollworms, moderately susceptible to grey mildew and fusarium wilt, resistant to bacterial blight
Spacing	: 60 x 45 cm
Plant Population	: 37,000/ha
Fertilizer dose	: 50:25:25 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: 3 - 3.5 kg/ha
Staple length	: Medium
Fibre strength	: 19.4 g/tex
Spinability count	: 30's
100 Seed wt.	: 6.5 g
Boll weight	: 2.5 to 3.0 g
Ginning percentage	: 39
Average yield	: Rainfed : 12-15 q/ha Irrigated : 20 - 25 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

AKH - 8828



Name of Variety	: AKH - 8828
Year of Release	: 2005
Parent	: PKV-0802 x BOS-795
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha region
Varietal Character	: Improved <i>G. hirsutum</i> L. Variety, leaves slightly hairy with 3-5 shallow cutted broad lobes, flower yellow with yellow anthers, medium round bolls with 3-4 locules
Duration	: Rainfed : 170-180 days
Plant height	: 70-80 cm
Maturity group	: Medium late
Reaction to major Pests/diseases	: Resistant to sucking pests, tolerant to pink bollworm, less susceptible to grey mildew and moderately resistance to bacterial blight
Spacing	: 60x30 cm
Plant Population	: 55,550/ha
Fertilizer dose	: 50:25:00 NPK kg/ha (50% at sowing & 50% after 30 DAS)
Seed rate	: 10-12 kg/ha
Staple length	: Medium
Fibre strength	: 19.1 g/tex
Spinability count	: 40's
100 Seed wt.	: 7-8 g
Boll weight	: 3.0 to 3.5 g
Ginning percentage	: 41
Average yield	: 12-14 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

AKA - 8



Name of Variety	: AKA - 8
Year of Release	: 2005
Parent	: (<i>G. anomalum</i> x <i>G. arboreum</i>) x <i>G. raimondii</i>
Breeding Method	: Pedigree
Recommended ecology	: Kharif, recommended for Vidharbha region
Varietal Character	: Improved <i>G. arboreum</i> L. Variety, leaf with 5 narrow lobes, flower yellow with brown petal spot, anthers yellow with pigmented filament, elongated medium boll pointed at tip with 3-4 locules sturdy main stem and deep roots
Plant height	: 120 - 140 cm
Duration	: Rainfed : 175-180 days
Maturity group	: Medium late
Reaction to major Pests/diseases	: Resistant to sucking pests to moderately resistant to pink bollworm, less susceptible to grey mildew, resistant to bacterial blight and tolerant to fusarium wilt
Spacing	: 60 x 15 cm
Plant Population	: 1,11,110/ha
Fertilizer dose	: 30:15:00 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: 12-15 kg/ha
Staple length	: Medium
Fibre strength	: 20.9 g/tex
Spinability count	: 40's
100 Seed wt.	: 5.6 g
Boll weight	: 2.5 to 3.0 g
Ginning percentage	: 38
Average yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



COTTON

PKV Suwarna



Name of Variety	: PKV Suwarna
Year of Release	: 2006
Parent	: GAK -423A x KWA-8
Breeding Method	: Heterosis breeding
Recommended ecology	: Kharif, recommended for Vidarbha region
Varietal Character	: Intra hirtusum genetic male sterility based cotton hybrid, leaf with 5 broad lobes, flower yellow with brown petal spot, medium round bolls pointed at tip with 3 - 4 locules.
Plant height	: 140 cm
Duration	: 180-190 days
Maturity group	: Medium late
Reaction to major	: Resistant to sucking pests, tolerant to bollworms, resistance to
Pests/diseases	bacterial blight, grey mildew and fusarium wilt
Spacing	: 60 x 45 cm
Plant Population	: 37,000/ha
Fertilizer dose	: 50:25:25 NPK kg/ha (50% dose of N at sowing and 50% after 30 DAS)
Seed rate	: 3 - 3.5 kg/ha
Staple length	: Medium
Fibre strength	: 21.82 g/tex
Spinability count	: 30's
100 Seed wt.	: 6.0 - 7.0 g
Boll weight	: 2.5 to 3.0 g
Ginning percentage	: 37-38
Average yield	: Rainfed : 12-15 q/ha Irrigated : 20- 25 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



Oilseed Crops

SOYBEAN TAMS - 38



Name of variety	: TAMS-38
Year of release	: 2003
Parents	: Monetta x PK-472
Breeding method	: Pedigree
Recommended ecology	: Medium soil, 700-1000 mm rainfall & 25-33°C temp. Suitable for Vidarbha region
Plant height	: 48-55 cm
Varietal character	: Green hypocotyl colour, dense grey pubescence, white flower, erect determinate growth, long receme, medium broad thick dark green nonlanceolate leaves and light reddish brown hilum, non-shattering
Duration	: 90-95 days
Maturity group	: Medium
Reaction to major	: Moderately resistant to stem fly, girdle beetle,
Pests/diseases	leaf defoliators and leaf miner, resistant to bacterial pustules and myrothecium leaf spot, moderately resistant to pod blight, SYMV, SMV, rhizoctonia aerial blight and tolerant to soybean rust.
Spacing	: 45 x 5 cm
Plant population	: 4,44,000/ha
Fertilizer dose	: 30:75:00 NPK Kg/ha
Seed rate	: 75 kg/ha
100 seed weight	: 12.4 g
Oil content	: 19.8 %
Seed yield	: 24-26 q/ha.
Advantages	: Well suited for intercropping and resistance to pod shattering (13 days delayed shattering after physiological maturity)



SUNFLOWER PKVSF - 9



Name of variety	: PKVSF - 9
Year of release	: 1996
Parents	: Selection from Canadian gene pool
Breedning Method	: Recurrent selection
Recommended ecology	: Suitable for Kharif, Rabi and Summer season in Vidarbha region
Varietal character	: High autogamy and head diameter up to 16.5 cm with central filling
Plant height	: 130-140 cm
Duration	: 82-85 days
Maturity group	: Early
Reaction to major Pests/diseases	: Tolerant to alternaria and downy mildew
Spacing	: 45 x 30 cm
Plant population	: 75,000/ha.
Fertilizer dose	: 80:60:00 kg NPK/ha ($\frac{1}{2}$ N + full dose of P_2O_5 as basal dose and $\frac{1}{2}$ N at 35 DAS)
Seed rate	: 8-10 kg/ha
Oil content	: 38-40%
100 seed weight	: 3.5 - 4.0 g
Seed yield	: 1000-1300 kg/ha
Advantage	: Suitable for multiple and double cropping system



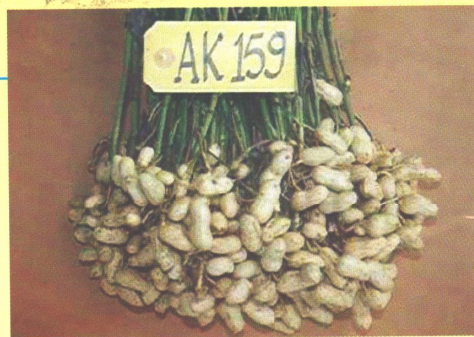
GROUNDNUT TAG - 24



Name of variety	: TAG - 24 (Spanish bunch)
Year of release	: 1992
Parents	: TGS-2 (TG 18A x M 13) X TGE-1 (Tall mutant x TG 9)
Breeding method	: Pedigree
Recommended ecology	: Suitable for kharif as well as summer groundnut areas of Vidarbha region. Accepted all over country for Rabi/Summer season.
Varietal character	: Semi-dwarf, small dark green leaflets, 1-2 seeded occasionally 3 seeded pods, light rose testa, early maturity, pubescence hairy, high harvest index.
Plant height	: 15-20 cm
Duration	: Kharif : 90-95 days, Summer : 110-115 days
Maturity group	: Early
Reaction to major pests/diseases	: Tolerant to bud necrosis and leaf spot
Spacing	: 30 x 10cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 25:50:00 NPK Kg/ha (Gypsum 300-500 kg/ha at 50 % flowering)
Seed rate	: 120 kg/ha
Oil content	: 50-51%
Shelling percentage	: 70-72
100 seed weight	: 35-38 g
Pod yield	: Kharif : 18-20 q/ha Summer : 30-32 q/ha Rabi : 22-24q/ha
Fodder yield	: 30 - 40 q/ha
Advantage	: Acceptable due to higher yield, earliness and tolerance to bud necrosis disease in summer season



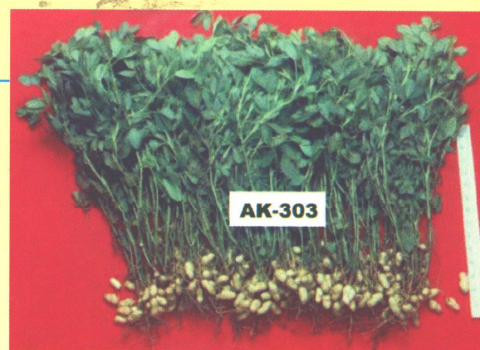
GROUNDNUT AK - 159



Name of variety	: AK - 159 (Spanish bunch)
Year of release	: 2002
Parents	: JL 24XCGC 4018
Breeding method	: Pedigree
Recommended ecology	: Northern Maharashtra including Vidarbha and Madhya Pradesh for kharif season
Varietal characters	: Normal plant, dark green and broad leaflets, pods are medium to small with slight beak, slight constriction and less reticulation, moderate shelling, moderate seed size with whitish testa.
Plant height	: 30-40
Duration	: 100-105 days
Maturity group	: medium
Reaction to major Pests/diseases	: Least damage by leaf-miner, less susceptible to foliar diseases.
Spacing	: 30 x 10cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 25:50:00 NPK Kg/ha. (Gypsum 300-500 kg/ha at the time of 50 % flowering)
Seed rate	: 110 kg/ha
Oil content	: 51-52 %
Shelling percentage	: 70-72
100 seed weight	: 32-35 g
Pod yield	: 20-22 q/ha
Fodder yield	: 40-45 q/ha
Advantage	: Acceptable due to its high pod, kernel and fodder yield



GROUNDNUT AK - 303



Name of variety	: AK - 303 (Virginia bunch)
Year of release	: 2007
Parents	: (ICGV-88384 x JL-24) X (ICGV-88438 x ICG-5240)
Breeding method	: Pedigree
Recommended ecology	: Suitable for kharif season of Vidarbha region
Varietal characters	: Bold podded, HPS type and tall growing with profuse vegetative growth.
Plant height	: 35-40 cm
Duration	: 120-125 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Less susceptible to foliar diseases (Early leaf spots & late leaf spots)
Spacing	: 45 x 10 cm
Plant population	: 2,22,000/ha
Fertilizer dose	: 25:75:30 NPK Kg/ha. (Gypsum 300-500 kg/ha at 50 % flowering)
Seed rate	: 105-110 kg/ha.
Oil content	: 47-49%
Shelling percentage	: 70-72
100 seed weight	: 70-80 g
Pod yield	: 20-22 q/ha
Fodder yield	: 50-60 q/ha
O/L Ratio	: 1.41
Advantage	: HPS type suitable for confectionary and table purpose. It has got export value. It's green pods are attractive and fetches more price in market



GROUNDNUT AK - 265



Name of variety	: AK - 265(Virginia bunch)
Year of release	: 2007
Parents	: ICGS 11 x US-63
Breeding method	: Pedigree
Recommended ecology	: Southern Maharashtra, Andra Pradesh, Karnataka and Tamilnadu
Varietal characters	: Dark green, medium leaflets, medium pods, Moderate beak, two seeded nature, constriction slight, reticulation moderate and medium kernel with rose testa.
Plant height	: 25-30 cm
Duration	: 115-120 days
Maturity group	: Medium
Reaction to major Pests/diseases	: Resistance to foliar diseases (Early leaf spots & late leaf spots)
Spacing	: 45x10 or 30x15 cm
Plant population	: 2,22,000/ha
Fertilizer dose	: 25:50:30 NPK Kg/ha (Gypsum 300-500 kg/ha at 50 % flowering)
Seed rate	: 100 kg/ha
Oil content	: 49-50 %
Shelling percentage	: 70-72
1000 seed weight	: 35-40 g
Pod yield	: 20-22 q/ha
Fodder yield	: 45-50 q/ha
Advantage	: Acceptable due to its high yield and resistance to foliar diseases



SESAME

N - 8



Name of variety	: N - 8
Year of release	: 1983
Parents	: Selection from Local sesame
Breeding method	: Selection
Recommended ecology	: Suitable for semi-rabi cultivation for Vidarbha region
Varietal characters	: 6-7 branches with light brown colour seed, violet flower
Plant height	: 110-130 cm
Duration	: 120 days
Maturity group	: Late
Reaction to major Pests/diseases	: Resistant to macrophomina root rot/stem rot, wilt, bacterial blight, bacterial leaf spot, powdery mildew and phyllody
Spacing	: 30 x10 cm
Plant population	: 2,50,000/ha
Fertilizer dose	: 25:25:00 NPK Kg/ha
Seed rate	: 2.5 - 3 kg/ha
Oil content	: 50 %
1000 seed weight	: 3 - 3.5 g
Seed yield	: 4 - 7 q/ha
Seed colour	: Light brown



SESAME **AKT - 64**



Name of variety	: AKT - 64
Year of release	: 1996
Parents	: N-128 x C -50
Breeding method	: Pedigree
Recommended ecology	: Suitable for Kharif cultivation for Vidarbha region
Varietal characters	: 3-4 branches, dull white colour, violet flower
Plant height	: 130-135 cm
Duration	: 85-90 days
Maturity group	: Early
Reaction to major pests/diseases	: Resistant to phytophthora, alternaria, powdery mildew, bacterial leaf spot, wilt and moderately resistant to phyllody, macrophomina stem / root rot disease
Spacing	: 3 0 x 10 cm
Plant population	: 2,50,000/ha
Fertilizer dose	: 40:25:00 NPK Kg/ha
Seed rate	: 2.5 kg/ha
Oil content	: 46 %
1000 seed weight	: 3 - 4 g
Seed yield	: 5.5 - 6.5 q/ha



SUNFLOWER PKVSH - 27



Name of variety	: PKVSH - 27
Year of release	: 1996
Parents	: GMS-2A x AK- 1R
Breeding method	: Heterosis
Recommended ecology	: Suitable for Vidarbha region
Varietal character	: Hybrid, mono head, stem curvature 20 - 25% of total length of plant, having medium green leaf colour
Plant height	: 135 - 145 cm
Duration	: 80 - 85 days
Maturity group	: Early
Reaction to major pests/diseases	: Moderately resistant to downy mildew, Alternaria leaf spot and rust diseases
Spacing	: 45 x 30 cm
Plant population	: 75,000/ha
Fertilizer dose	: 80 :60:0 NPK kg/ha ($\frac{1}{2}$ N + full dose of P_2O_5 as basal dose and $\frac{1}{2}$ N at 35 DAS)
Seed rate	: 5 kg/ha
Oil content	: 38-40%
100 seed weight	: 3.5 - 4.0 g
Seed yield	: 13-16 q/ha
Advantage	: Having early maturity, fits well in all cropping pattern



SUNFLOWER **TAS - 82**



Name of variety	: TAS - 82
Year of release	: 2006
Parents	: Parent Variety is Surya
Breeding Method	: Mutation and selection
Recommended ecology	: Suitable for Kharif and Rabi season in Vidarbha
Varietal character	: Medium head size, turned down at maturity, dark yellow petals and dark green leaves
Plant height	: 135-170 cm
Duration	: 90-100 days
Maturity group	: Midlate
Reaction to major pests/diseases	: Relatively tolerant to sunflower necrosis disease
Spacing	: 45 x 30 cm
Plant population	: 75,000/ha
Fertilizer dose	: 80:60:00 kg NPK/ha ($\frac{1}{2}$ N + full dose of P_2O_5 as basal dose and $\frac{1}{2}$ N at 35 DAS)
Seed rate	: 8-10 kg/ha
Oil content	: 38-41%
100 seed weight	: 4 - 5.0 g
Seed yield	: 1200-1300 kg/ha
Advantage	: Suitable for cultivation in low rainfall conditions



SAFFLOWER AKS - 207



Name of variety	: AKS - 207
Year of release	: 2007
Parents	: [(Bhima x Tara) x N7] x [(AKS 15 x AI)xAKS68]
Breeding method	: Pedigree
Recommended ecology	: Suitable for Vidarbha region of Maharashtra
Varietal character	: Flower petals are yellow turning to orange red after fading, spiny nature
Plant height	: 70-80 cm
Duration	: 125-130 days
Maturity group	: Medium
Reaction to major pests/diseases	: Similar to earlier recommended variety
Spacing	: 45 x20 cm
Plant population	: 1,11,000/ha
Fertilizer dose	: 25 :25:0 NPK kg/ha
Seed rate	: 10-12 kg/ha
Oil content	: 30-33%
100 seed weight	: 6.5 g
Seed yield	: 14-20 q/ha
Advantage	: Ten percent higher yield, eight days early maturity over Bhima, Bold seed size (6.5 g)



CASTOR **AKC - 1**



Name of variety	: AKC - 1
Year of release	: 1991
Parents	: Developed by mass selection from variety B - 7
Breeding method	: Mass selection
Recommended ecology	: Suitable for shallow to medium deep soil under under rainfed condition of Vidarbha
Varietal characters	: Non-lodging, early threshability and non-shattering
Plant height	: 90-100 cm (up to main spike)
Duration	: 130-140 days
Maturity group	: Late
Reaction to major Pests/diseases	: Moderately tolerant to castor semi looper, capsule borers
Spacing	: 90 x 45 cm
Plant population	: 24,000/ha
Fertilizer dose	: 60:40:00 NPK kg/ha
Seed rate	: 10-12 kg/ha
Oil content	: 43.46%
100 seed weight	: 310-315 g
Seed yield	: 10-12 q/ha



SESAME

N - 8



Name of variety	: N - 8
Year of release	: 1983
Parents	: Selection from Local sesame
Breeding method	: Selection
Recommended ecology	: Suitable for semi-rabi cultivation for Vidarbha region
Varietal characters	: 6-7 branches with light brown colour seed, violet flower
Plant height	: 110-130 cm
Duration	: 120 days
Maturity group	: Late
Reaction to major Pests/diseases	: Resistant to macrophomina root rot/stem rot, wilt, bacterial blight, bacterial leaf spot, powdery mildew and phyllody
Spacing	: 30 x10 cm
Plant population	: 2,50,000/ha
Fertilizer dose	: 25:25:00 NPK Kg/ha
Seed rate	: 2.5 - 3 kg/ha
Oil content	: 50 %
1000 seed weight	: 3 - 3.5 g
Seed yield	: 4 - 7 q/ha
Seed colour	: Light brown



SESAME **AKT - 64**



Name of variety	: AKT - 64
Year of release	: 1996
Parents	: N-128 x C -50
Breeding method	: Pedigree
Recommended ecology	: Suitable for Kharif cultivation for Vidarbha region
Varietal characters	: 3-4 branches, dull white colour, violet flower
Plant height	: 130-135 cm
Duration	: 85-90 days
Maturity group	: Early
Reaction to major pests/diseases	: Resistant to phytophthora, alternaria, powdery mildew, bacterial leaf spot, wilt and moderately resistant to phyllody, macrophomina stem / root rot disease
Spacing	: 3 0 x 10 cm
Plant population	: 2,50,000/ha
Fertilizer dose	: 40:25:00 NPK Kg/ha
Seed rate	: 2.5 kg/ha
Oil content	: 46 %
1000 seed weight	: 3 - 4 g
Seed yield	: 5.5 - 6.5 q/ha



SESAME **AKT - 101**



Name of variety	: AKT -101
Year of release	: 2001
Parents	: N-62-10 x R-19
Breeding method	: Pedigree
Recommended ecology	: Summer cultivation with irrigation facilities
Varietal character	: 4-5 branches, white seed colour and violet flower
Plant height	: 89 cm
Duration	: 85-92 days
Maturity group	: Early
Reaction to major pests/diseases	: Moderately resistance to phyllody, macrophomina root rot and bacterial blight
Spacing	: 30 x 10cm
Plant population	: 2,50,000/ha
Fertilizer dose	: 25:25:00 NPK Kg/ha
Seed rate	: 3 - 3.5 kg/ha
Oil content	: 43.1 %
1000 seed weight	: 3.8 g
Seed yield	: 7.5 - 8.5 q/ha
Seed colour	: White



SESAME **PKV NT - 11**



Name of variety	: PKV NT - 11
Year of release	: 2009
Parents	: JLT-9 x NT-4
Breeding method	: Pedigree
Recommended ecology	: Suitable for early or late sowing condition for summer season for Vidarbha zone
Varietal character	: 4-5 branches with white colour seed, violet flower
Plant height	: 91 cm
Duration	: 92-105 days
Maturity group	: Mid late
Reaction to major pest/diseases	: Resistant to phyllody and moderately resistant to root rot and bacterial blight
Spacing	: 30 x 10 cm
Plant population	: 2,50,000/ha
Fertilizer dose	: 25:25:00 NPK Kg/ha
Seed rate	: 3-4 kg/ha
Oil content	: 48.3 %
1000 seed weight	: 3-4 g
Seed colour	: White
Seed yield	: 7-8 q/ha



LINSEED

NL - 97



Name of variety	: NL - 97
Year of release	: 1997
Parents	: R-7 x RLC-4
Breeding method	: Pedigree
Recommended ecology	: Suitable for timely sown rainfed condition of Vidarbha region
Varietal characters	: Blue colour flower, 6-7 branches per plant, 59 capsule per plant
Plant height	: 50-55 cm
Duration	: 116-121 days
Maturity group	: Medium
Reaction to major Pests/diseases	: Moderately resistant to alternaria blight, powdery mildew and budfly and tolerant to wilt
Seed colour	: Brown
Spacing	: 30 x 3.5 cm
Plant population	: 7,50,000/ha
Fertilizer dose	: 25:25:00 NPK Kg/ha
Seed rate	: 25 kg/ha
Oil content	: 42.1%
1000 seed weight	: 6.8 g
Seed yield	: 800 to 1000 kg/ha



LINSEED **NL - 142**



Name of variety	: NL - 142
Year of release	: 2004
Parents	: R-7 x RLC-6
Breeding method	: Pedigree
Recommended ecology	: Suitable for rabi season under irrigation condition for Zone III comprising Madhya Pradesh, Rajasthan and Bundelkhand region of Uttar Pradesh
Varietal characters	: Flower Blue Colour, disc shape and medium size
Plant height	: 55-60 cm
Duration	: 118-123 days
Maturity group	: Medium
Reaction to major pests/diseases	: Moderately susceptible to wilt, alternaria blight and rust and moderately resistant to powdery mildew and bud fly, resistant to leaf miner
Seed colour	: Brown with shining
Spacing	: 30 x 3.5 cm
Plant population	: 7,50,000 lakh/ha
Fertilizer dose	: 60:30:00 NPK Kg/ha
Seed rate	: 25 kg/ha
Oil content	: 38.26 to 42.36 %
1000 seed weight	: 6.5 gm
Seed yield	: 15 to 18 q/ha



GREEN GRAM TARM - 2



Name of variety	: TARM - 2
Year of release	: 1992
Parents	: RUM-5 X TPM-1
Breeding method	: Pedigree
Recommended ecology	: Rabi cultivation in Eastern Vidarbha region
Varietal character	: Spreading type with basal 2-3 branches with green stem, pods straight with curvature at the tip, photo insensitive
Plant height	: 40 to 50 cm
Duration	: 85 to 90 days
Maturity group	: Medium
Reaction to major Pests/diseases	: Tolerant to powdery mildew
Sowing period	: 2 nd week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12-15 kg/ha
100 seed weight	: 3.0 - 3.3 g
Protein content	: 22-23 %
Dal recovery	: 84.5%
Cooking time	: 14 min
Grain yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



LINSEED **PKV NL - 260**



Name of variety	: PKV NL - 260
Year of release	: 2009
Parents	: R-552 x RLC-6
Breeding method	: Pedigree
Recommended ecology	: Suitable for rabi season under rainfed condition for Vidarbha region of Maharashtra
Varietal characters	: Flower Blue Colour
Plant height	: 38-63 cm
Duration	: 111 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately resistant alternaria, powdery mildew and bud fly
Seed colour	: Brown
Spacing	: 30 x 3.5 cm
Plant population	: 7,50,000/ha
Fertilizer dose	: 25:25:00 NPK Kg/ha
Seed rate	: 25 kg/ha
Oil content	: 43 %
1000 seed weight	: 7.5 g
Seed yield	: 11 to 18 q/ha



MUSTARD **PKV Shatabdi**



Name of variety	: PKV Shatabdi (ACN - 9)
Year of release	: 2005
Parents	: Seeta x RW-351
Breeding method	: Pedigree
Recommended ecology	: For Rabi cultivation with protective irrigation.
Varietal character	: Small seeded
Plant height	: 160 cm
Duration	: 95-105 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately susceptible to aphids and all diseases
Spacing	: 45 x10 cm
Plant population	: 2,22,000/ha
Fertilizer dose	: 40:20:00 NPK Kg/ha
Seed Rate	: 5-6 kg/ha
Oil content	: 38 - 40 %
1000 seed weight	: 2.9 - 3.8 g
Grain yield	: 8-10 q/ha



Pulses

GREEN GRAM TAP - 7



Name of variety	: TAP - 7
Year of release	: 1982
Parents	: Gamma rays induced mutation from S-8
Breeding method	: Mutation
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal characters	: Erect type determinate pod habit, with 4-5 branches, seeds medium bold, shiny grains
Plant height	: 40-50 cm
Duration	: 65 - 68 days
Maturity group	: Early
Reaction to major Pest/diseases	: Tolerant to powery mildew and leaf spot
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30 x 10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 10 - 12 kg/ha
100 seed weight	: 2.5 - 2.7 g
Protein content	: 22-23 %
Dal recovery	: 71-72 %
Cooking time	: 14 min
Grain yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



GREEN GRAM **AKM - 8803**



Name of variety	: AKM - 8803
Year of release	: 1992
Parents	: (PIMS-3 X MH-1) b-b-26-10-4
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal character	: Semispreading, stem colour green, partially pigmented pods bold in size, seed medium bold, pod shape straight with curvature at the tip
Plant height	: 41 to 50 cm
Duration	: 60-70 days
Maturity group	: Early
Reaction to major Pests/diseases	: Resistant to powdery mildew
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12-15 kg/ha
100 seed weight	: 3-4 g
Protein content	: 23-24 %
Dal recovery	: 85.4%
Cooking time	: 14 min
Grain yield	: 9-10 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



GREEN GRAM TARM - 2



Name of variety	: TARM - 2
Year of release	: 1992
Parents	: RUM-5 X TPM-1
Breeding method	: Pedigree
Recommended ecology	: Rabi cultivation in Eastern Vidarbha region
Varietal character	: Spreading type with basal 2-3 branches with green stem, pods straight with curvature at the tip, photo insensitive
Plant height	: 40 to 50 cm
Duration	: 85 to 90 days
Maturity group	: Medium
Reaction to major Pests/diseases	: Tolerant to powdery mildew
Sowing period	: 2 nd week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12-15 kg/ha
100 seed weight	: 3.0 - 3.3 g
Protein content	: 22-23 %
Dal recovery	: 84.5%
Cooking time	: 14 min
Grain yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



GREEN GRAM **TARM - 18**



Name of variety	: TARM - 18
Year of release	: 1994
Parents	: PDM-54 x RUM-5
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal character	: Medium shiny grains
Plant height	: 50 to 58 cm
Duration	: 68-70 days
Maturity group	: Early
Reaction to major Pests/diseases	: Resistant to powdery mildew
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12-15 kg/ha
100 seed weight	: 3.0 - 4.0 g
Protein content	: 21-22%
Dal recovery	: 82 %
Cooking time	: 14 min
Grain yield	: 10-12 q/ha



GREEN GRAM TARM - 1



Name of variety	: TARM - 1
Year of release	: 1995
Parents	: RUM - 5 x TPM- 1
Breeding method	: Pedigree
Recommended ecology	: Rabi sowing (October and November) in Central and South Zone of India
Varietal character	: Spreading type with basal 2-3 branches, photo-insensitive, small and shiny grains, under water stress good yield
Plant height	: 50-60 cm
Duration	: South Zone - 80-92 days Central Zone - 95-105 days
Maturity group	: Medium to late
Reaction to major Pests/diseases	: Resistant to powdery mildew
Sowing period	: 1 st week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha.
Seed rate	: 12-15 kg/ha.
100 seed weight	: 3 - 3.5 g
Protein content	: 21-23 %
Dal recovery	: 84.5 %
Cooking time	: 14 min
Grain yield	: 9-10 q/ha



GREEN GRAM **PKV Mung**



Name of variety	: PKV Mung (AKM - 8802)
Year of release	: 2000
Parents	: MH-1 x PIMS-4
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal character	: Green lustrous, bold grains, early seedling, vigour and red pigmentation on stem and leaf veins
Plant height	: 49-57 cm
Duration	: 57 - 68 days
Maturity group	: Early
Reaction to major Pests/diseases	: Resistant against powdery mildew
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 10-12kg/ha
100 seed weight	: 4 - 5 gm
Protein content	: 22-24 %
Dal recovery	: 83%
Cooking time	: 15 min
Grain yield	: 10-11 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



GREEN GRAM **PKV Green Gold**



Name of variety	: PKV Green Gold (AKM- 9911)
Year of release	: 2007
Parents	: BM-86 x MH-1
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal characters	: Non lodging and Non Shattering
Plant height	: 50 to 71 cm
Duration	: 64-72days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately resistant to powdery mildew
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30 x 10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 10 - 12 kg/ha
100 seed weight	: 3.0 - 4.0 g
Protein content	: 23-24 %
Dal recovery	: 81 to 82 %
Cooking time	: 14 min
Grain yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



GREEN GRAM **PKV AKM - 4**



Name of variety	: PKV AKM - 4
Year of release	: 2009
Parents	: BM-4 x PS-7
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in central and south zone of India
Varietal characters	: Shiny grains, synchronous maturity, stem and midrib of leaves pigmented
Plant height	: 68 cm
Duration	: 67 days
Maturity group	: Early
Reaction to major Pests/diseases	: Less susceptible to Cercospora leaf spot, macrophomina blight and powdery mildew
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30 x 10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 13 - 15 kg/ha
100 seed weight	: 3.0 - 4.0 g
Protein content	: 22-23 %
Dal recovery	: 83 %
Cooking time	: 14 min
Grain yield	: 9-10 q/ha



BLACK GRAM TAU - 1



Name of variety	: TAU-1 (Trombay-Akola Udid -1)
Year of release	: 1985
Parents	: T-9 X U-196
Breeding method	: Pedigree
Recommended ecology	: Kharif (except in eastern Vidarbha zone)
Varietal characters	: Erect, medium tall with nonhairy or sparse hairy pods
Plant height	: 30-40 cm
Duration	: 68-73 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately resistant to macrophomina blight and powdery mildew, tolerant to sucking pests
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12 - 15 kg/ha
100 seed weight	: 4 - 5 gm
Protein content	: 21-22 %
Dal recovery	: 65 %
Cooking time	: 20 min
Grain yield	: 10-11 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



BLACK GRAM TAU - 2



Name of variety	: TAU-2 (Trombay Akola Udid-2)
Year of release	: 1991
Parents	: T-9 X U-196
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal characters	: Pods having few or no hairs, intermediate in growth between T-9 and TAU-1, leaflets are triangular in shape as in TAU-1
Plant height	: 30-35 cm
Duration	: 70 to 75 days
Maturity group	: Early
Reaction to major Pests/diseases	: Resistant to macrophomina blight, moderately resistant to powdery mildew
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12 - 15 kg/ha
100 seed weight	: 4 - 5 gm
Protein content	: 20-22%
Dal recovery	: 65%
Cooking time	: 20 min
Grain yield	: 9-10 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



BLACK GRAM AKU - 4



Name of variety	: AKU - 4 (Melghat)
Year of release	: 1994
Parents	: Local land races from Melghat tribal area
Breeding method	: Mass selection
Recommended ecology	: Rabi cultivation in eastern Vidarbha zone
Varietal characters	: Medium tall in growth, leaflets are broad, elongated shape, pod having few hairs, resistant to water stress
Plant height	: 25-30 cm
Duration	: 90-100 days
Maturity group	: Medium
Reaction to major Pests/diseases	: Moderately resistant to YMV
Sowing period	: 2 nd week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12-15 kg/ha
100 seed weight	: 4.5 - 5 gm
Protein content	: 18-19 %
Dal recovery	: 71.49%
Cooking time	: 21 min
Grain yield	: 9-10 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



BLACK GRAM PKVU - 15



Name of variety	: PKVU-15
Year of release	: 2001
Parents	: TPU-4 x DU-4
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal characters	: Intermediate growth between T-9 and TAU-1, leaflets are triangular in shape, pods having few hairs
Plant height	: 30-40 cm
Duration	: 65-72 days
Maturity group	: Early
Reaction to major Pests/diseases	: Tolerant to powdery mildew and dry root rot
Sowing period	: 2 nd week of June to 1 st week of July
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK Kg/ha
Seed rate	: 12 - 15 kg/ha
100 seed weight	: 3.4 - 5.2 gm
Protein content	: 21-22 %
Dal recovery	: 65 %
Cooking time	: 20 min
Grain yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



CHICKPEA **Hirwa Chaffa**



Name of variety	: Hirwa Chaffa (AKGS-1)
Year of release	: 1994
Parents	: Selection from germplasm
Breeding method	: Selection
Recommended ecology	: Rabi cultivation in Vidarbha region
Varietal characters	: Semi spreading to spreading, flowers: pink, matured grains: green, foliage remain green after drying at maturity, better drought tolerant
Plant height	: 40-50 cm
Duration	: 105-110 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately resistant to Fusarium wilt
Sowing period	: 1 st week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK kg/ha
Seed rate	: 50-60 kg/ha.
100 seed weight	: 15-16 gm
Protein content	: 22-24 %
Cooking time	: 35 min
Grain yield	: 15-20 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



CHICKPEA

Gulak - 1



Name of variety	: Gulak-1 (Gulabi)
Year of release	: 1997
Parents	: (N-59 x D-8) 1-88-88A
Breeding method	: Pedigree
Recommended ecology	: Rabi cultivation in Maharashtra
Varietal characters	: Semispreading, white flowers, gulabi type seed, moderately resistant to drought
Plant height	: 55-60 cm
Duration	: 110-115 days
Maturity group	: Medium
Reaction to major Pests/diseases	: Moderately resistant to wilt
Sowing period	: Rainfed : 2 nd week of October Irrigated : 1 st week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK kg/ha.
Seed rate	: 75-85 kg/ha.
100 seed weight	: 22-26 g
Protein content	: 22-23 %
Dal recovery	: 62%
Cooking time	: 35 min
Grain yield	: 20-22 q/ha.
Additional information	: Excellent parchaing quality
Registration status	: Submitted to PPV & FRA, New Delhi



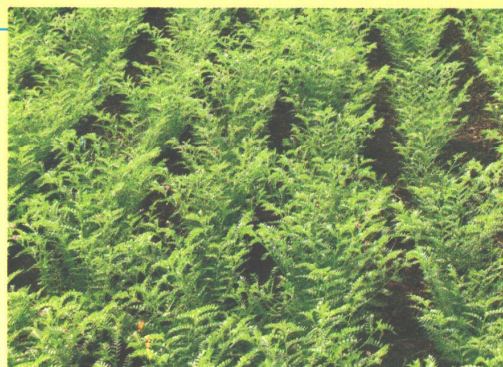
CHICKPEA **PKV Kabuli - 2**



Name of variety	: PKV Kabuli-2
Year of release	: 2000
Parents	: (ICCC-2 x Surutato-77) x ICC - 7344 ICC - 870026 - PB - PB - 14P - BP - 62AK - 7AK - BAK
Breeding method	: Pedigree
Recommended ecology	: Rabi cultivation under irrigation in Central Zone of India
Varietal characters	: Semi spreading with 4-5 basal branches, white flowers, very bold pods and seeds
Plant height	: 55-60 cm
Duration	: 100-105 days
Maturity group	: Early
Reaction to major Pests/diseases	: Resistant to Fusarium wilt
Spacing	: 45x10 cm
Plant population	: 2,22,000/ha
Fertilizer dose	: 25:50:00 NPK kg/ha
Sowing period	: 1 st week of November
Seed rate	: 110-125 kg/ha
100 seed weight	: 41 g
Protein content	: 23 %
Cooking time	: 32 min
Grain yield	: 12-15 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



CHICKPEA **SAKI - 9516**



Name of variety	: SAKI - 9516
Year of release	: 2002
Parents	: ICCV-42 x ICCV-10
Breeding method	: Pedigree
Recommended ecology	: Rabi cultivation in Central zone
Varietal characters	: Semispreading plant with profuse branching, dark green foliage, dark pink flowers and light brown angular seeds, moderately resistant to collar rot and tolerant to drought being early in maturity
Plant height	: 40-50 cm
Duration	: 105-110 days
Maturity group	: Medium
Reaction to major pests/diseases	: Resistant to fusarium wilt, moderately resistant to Collar rot, BGM and stunt
Sowing period	: 2 nd week of October to 1 st week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK kg/ha
Seed rate	: 50-60 kg/ha
100 seed weight	: 16-18 g
Protein content	: 22 %
Dal recovery	: 65%
Cooking time	: 36 min
Grain yield	: 18-20 q/ha



CHICKPEA **JAKI - 9218**



Name of variety	: JAKI - 9218
Year of release	: 2005
Parents	: (ICCC-37 x GW-57) x ICCV-17 ICCX-860265-BP-BP-29P-BP
Breeding method	: Bulk pedigree
Recommended ecology	: Rabi cultivation in Central zone of India
Varietal characters	: Semi spreading, bold seeded, profuse branching, resistant to lodging, shattering.
Plant height	: 35-40 cm
Duration	: 105-110 days
Maturity group	: Early
Reaction to major Pests/diseases	: Resistant to fusarium wilt, root rot and collar rot
Sowing period	: Rainfed : 2 nd week of October Irrigated : 1 st week of November
Spacing	: 30x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK kg/ha
Seed rate	: 75-85 kg/ha
100 seed weight	: 22-26 g
Protein content	: 14-15 %
Dal recovery	: 62 %
Cooking time	: 38 min
Grain yield	: 18-20 q/ha.
Registration status	: Submitted to PPV & FRA, New Delhi



CHICKPEA **PKV Kabuli - 4**



Name of variety	: PKV Kabuli - 4
Year of release	: 2008
Parents	: Selection from the germplasm collected from Malegaon taluka of Washim district
Breeding method	: Mass selection
Recommended ecology	: Rabi cultivation under irrigation in Vidarbha region of Maharashtra
Varietal character	: Bold seed size, ceramic white attractive seed coat colour
Plant height	: 40-50 cm
Duration	: 100-110 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately resistant to wilt
Sowing period	: 1 st week of November
Spacing	: 45x10 cm
Plant population	: 2,22,000/ha
Fertilizer dose	: 25:40:00 NPK kg/ha
Seed rate	: 85-90 kg/ha
100 seed weight	: 52-58 gm
Protein content	: 20-21%
Dal recovery	: 62%
Cooking time	: 32 min
Grain yield	: 10-12 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PIGEONPEA Vishakha - 1



Name of variety	: Vishakha-1
Year of release	: 1982
Parents	: T-21
Breeding method	: Mutation breeding
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal character	: Resistant to lodging, moderately drought tolerant
Plant height	: 140-150 cm
Duration	: 130-135 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately tolerant to pod borer complex
Sowing period	: 2 nd week of June to 2 nd week of July
Spacing	: 50 x 20 cm
Plant population	: 1,00,000/ ha
Fertilizer dose	: 25:50:00 NPK kg/ha
Seed rate	: 25-30 kg/ha
100 seed weight	: 9-10 g
Protein content	: 22-23 %
Dal recovery	: 77%
Cooking time	: 22 to 23 min
Grain yield	: 8-9 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PIGEONPEA TAT - 10



Name of variety	: TAT-10 (Trombay Akola Tur-10)
Year of release	: 1984
Parents	: TT-2 x TT-8
Breeding method	: Pedigree
Recommended ecology	: Kharif cultivation in Maharashtra
Varietal character	: Suitable for double cropping
Plant height	: 90-100 cm
Duration	: 100-115 days
Maturity group	: Extra early
Reaction to major Pests/diseases	: Tolerant to wilt
Sowing period	: 2 nd week of June to 2 nd week of July
Spacing	: 45x15 cm
Plant population	: 1,48,000/ha
Fertilizer dose	: 25:50:00 NPK kg/ha
Seed rate	: 40-45 kg/ha
100 seed weight	: 8-9 g
Protein content	: 23-24%
Dal recovery	: 75%
Cooking time	: 25 min
Grain yield	: 8-9 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



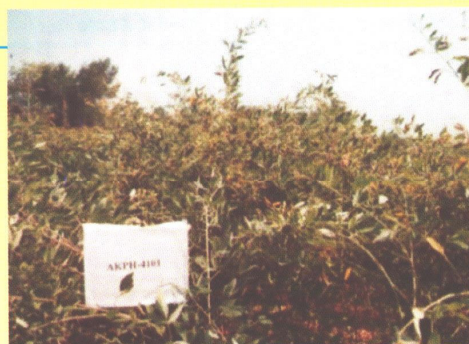
PIGEONPEA AKT - 8811



Name of variety	: AKT-8811
Year of release	: 1995
Parents	: (ICPL- 6 x DA-6, ICPL- 6 x AL-57, ICPL-95 x H-80-110, ICPL-84008 x AL-57)
Breeding method	: Mass selection
Recommended ecology	: Kharif cultivation in Maharashtra
Varietal characters	: Dark yellow petals with light red streak, pods are green with brown streaks, non-lodging and non shattering
Plant height	: 170-180 cm
Duration	: 145-150 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately resistant to Fusarium wilt, moderately resistant to pod borer
Sowing period	: 2 nd week of June to 2 nd week of July
Spacing	: 45x15 cm
Plant population	: 1,48,000/ha
Fertilizer dose	: 25:50:00 NPK kg/ha
Seed rate	: 25-30 kg/ha
100 seed weight	: 9-10 g
Protein content	: 20-21 %
Dal recovery	: 70.7 %
Cooking time	: 24 min
Grain yield	: 11-13 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PIGEONPEA AKPH - 4101



Name of variety	: AKPH-4101
Year of release	: 1997
Parents	: AKms-4 x AK-101
Breeding method	: Hybrid breeding
Recommended ecology	: Kharif cultivation in Central zone for states of MS, MP, Gujrat
Varietal character	: Indeterminate flowering, semi spreading branches, broad and big green pod, medium bold reddish brown seed
Plant height	: 150-160 cm
Duration	: 140-150 days
Maturity group	: Early
Reaction to major Pests/diseases	: Better tolerance against wilt, susceptible to SMD under epiphytotic condition, better field reaction against Phytophthora
Sowing period	: 2 nd week of June to 2 nd week of July
Spacing	: Sole cropping 60x20cm, Intercropping 120x15cm
Plant population	: Sole crop : 83,330/ ha Intercropping : 55,550/ha
Fertilizer dose	: 25:50:00 NPK kg/ha
Seed rate	: Sole cropping 20-22 kg/ha Intercropping 8-10 kg/ha
100 seed weight	: 8-9gm
Protein content	: 21-22 %
Dal recovery	: 70.8%
Cooking time	: 24 min
Grain yield	: 12-13 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PIGEONPEA **Akola Santur-1**



Name of variety	: Akola Santur-1 (AKPH-2022)
Year of release	: 1999
Parents	: AKms-2 x AK-022
Breeding method	: Hybrid breeding
Recommended ecology	: Kharif cultivation in Vidarbha region
Varietal characters	: Nonlodging and nonshattering
Plant height	: 170-180 cm
Duration	: 175-185 days
Maturity group	: Medium
Reaction to major Pests/diseases	: Tolerant to Fusarium wilt
Sowing period	: 2 nd week of June to 2 nd week of July
Spacing	: 60x20cm
Plant population	: 83,330/ha
Fertilizer dose	: 25:50:00 NPK kg/ha
Seed rate	: 12-15 kg/ha.
100 seed weight	: 9-10 gm
Protein content	: 21-22 %
Dal recovery	: 71 to 72%
Cooking time	: 22 to 23 min.
Grain yield	: 13-15 q/ha.
Registration status	: Submitted to PPV & FRA, New Delhi



LABLAB BEAN **AKLB - 9306**



Name of variety	: AKLB - 9306
Year of release	: 2002
Parents	: Kokan Bhushan x Kokan wal No 1:I-27-6-K(P)
Breeding method	: Pedigree
Recommended ecology	: Best suited for eastern Vidarbha zone, late Kharif (August sowing), Rabi (Sept-October sowing)
Varietal characters	: Determinate growth habit, bushy growth in rabi season with 3 to 5 branches, white flowers, seed brown in colour, moderately tolerant to water stress in rabi season.
Duration	: 100- 118 days
Maturity group	: Medium
Reaction to major pests/diseases	: Tolerant to yellow mosaic virus and Rhizoctonia root rot
Sowing period	: 1 st to 15 th November in eastern Vidarbha zone, Aug-Sept in case of contingency in eastern Vidarbha zone
Spacing	: 30 x10 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 20:40:00 NPK kg/ha
Seed rate	: 70-75 kg/ha
100 seed weight	: 20-27 g
Protein content	: 21-22 %
Dal recovery	: 89-76%
Cooking time	: 16 min
Grain yield	: 6-10 q/ha



Cereals

SORGHUM **Improved Ramkel**



Name of variety	: Improved Ramkel
Year of release	: 1984
Parents	: Selection from Ramkel
Breeding method	: Pure line selection
Recommended ecology	: Suitable for kharif season of Maharashtra
Varietal character	: High yielding, single cut forage sorghum variety with long broad leaves, semi compact earhead, faint red gloom and dull green midrib
Plant height	: 250 cm
Duration	: 135-140 days
Maturity group	: Late
Reaction to major Pests/diseases	: Tolerant to shoot fly and stem borer
Spacing	: 45x15 cm
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha (50% N: 40 at sowing and 50% N after 30 DAS)
Seed rate	: 50 kg/ha
1000 seed weight	: 30 g
Grain yield	: 25 q/ha
Green fodder yield	: 350 q/ha
Dry fodder yield	: 150 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



SORGHUM **SPH - 840**



Name of variety	: SPH - 840
Year of release	: 1988
Parents	: MS 70AxICSR 89058
Breeding method	: Heterosis breeding
Recommended ecology	: Recommended for Kharif season of Maharashtra
Varietal character	: No pigments on stem, dark green leaves, long earhead
Plant height	: 220-225 cm
Duration	: 115-120 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Moderately tolerant to shoot fly and stem borer,
Spacing	: 45x15 cm
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha (50 % at sowing and 50 % N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
1000 seed weight	: 30-32 g
Grain yield	: 48-50 q/ha
Dry fodder yield	: 105-110 q/ha



SORGHUM **SPH - 388**



Name of variety	: SPH - 388
Year of release	: 1988
Parents	: MS 296A x AKR - 73
Breeding method	: Heterosis breeding
Recommended ecology	: Recommended for Kharif season of Maharashtra
Varietal character	: Kharif sorghum dual purpose potential hybrid with dark green leaves, awnless, straw glume, long ear head, easy threshability with excellent bread quality
Plant height	: 200 cm
Duration	: 115-120 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Reasonably tolerant to shoot fly and stem borer, moderately tolerant to grain mold
Spacing	: 45x15 cm
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha (50% N at sowing and 50 % N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
1000 seed weight	: 29.3 g
Grain yield	: 48-50 q/ha
Dry fodder yield	: 120-125 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



SORGHUM **SPV - 669**



Name of variety	: SPV - 669
Year of release	: 1988
Parents	: Selection from SPV 97x SPV 29
Breeding method	: Pedigree selection
Recommended ecology	: Recommended for Kharif season of Maharashtra
Varietal character	: Kharif sorghum dual purpose variety with broad leaves, thick juicy stem, oblong earhead
Plant height	: 200-210
Duration	: 115-120 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Highly tolerant to shoot fly and stem borer, moderately tolerant to grain mold
Spacing	: 45x15 cm.
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha. (50 % Nat sowing and 50% N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
1000 seed weight	: 25.6 g
Grain yield	: 38-40 q/ha
Dry fodder yield	: 120-125 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



SORGHUM **CSH - 14**



Name of variety	: CSH - 14
Year of release	: 1992
Parents	: AKMS 14A x AKR 150
Breeding method	: Heterosis breeding
Recommended ecology	: Recommended for Kharif and Rabi for whole country
Varietal character	: Early kharif hybrid with broad leaves, erect canopy, long earhead and straw coloured glume
Plant height	: 145 - 150 cm
Duration	: 100-105 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately tolerant to shoot fly and stem borer
Spacing	: 45x15 cm.
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha. (50% N at sowing and 50 % N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
1000 seed weight	: 27.00 g
Grain yield	: 48-50 q/ha
Dry fodder yield	: 85-90 q/ha



SORGHUM **CSH - 19 R**



Name of variety	: CSH - 19 R
Year of release	: 2000
Parents	: MS 104A x AKR 354
Breeding method	: Heterosis breeding
Recommended ecology	: Recommended for Rabi season for whole country
Varietal character	: Potential rabi hybrid with partially open internodes, dark green leaves, drooping canopy and faint red glume colour
Plant height	: 225 cm
Duration	: 115-120 days
Maturity group	: Mid late
Reaction to major pests/diseases	: Relatively tolerant to major pests of sorghum
Spacing	: 45x15 cm
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha (50% N at sowing and 50 % N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
1000 seed weight	: 30.0 g
Grain yield	: 38-40 q/ha
Dry fodder yield	: 80-85 q/ha



SORGHUM **PKV Kranti**



Name of variety	: PKV Kranti (AKSV - 13 R)
Year of release	: 2004
Parents	: Selection from SPV 1201 x Ringni
Breeding method	: Pedigree
Recommended ecology	: Recommended for Rabi season in Maharashtra
Varietal character	: Potential rabi sorghum variety with partially open internodes, green leaves, white mid rib, erect canopy, panicle shape obvoid, semi compact panicle, straw coloured glume, with 1/3 glume coverage
Plant height	: 235 - 240 cm
Duration	: 120-122 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Comparatively tolerant to shoot fly and stem borer
Spacing	: 45x15 cm
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha (50 % N at sowing and 50 % N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
1000 seed weight	: 30.0 g
Grain yield	: 25-30 q/ha
Dry fodder yield	: 80-85 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



SORGHUM **AKSSV - 22**



Name of variety	: AKSSV - 22
Year of release	: 2006
Parents	: Selection from S 171 x HES 13
Breeding method	: Pedigree
Recommended ecology	: Recommended for Kharif season of Maharashtra
Varietal character	: Sweet sorghum variety with dark green leaves, mid rib dull green, drooping canopy, awnless and semi-compact panicle with straw coloured glume
Plant height	: 255 - 260 cm
Duration	: 115-120 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Tolerant to stem borer
Spacing	: 45x15 cm.
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha. (50 % N at sowing and 50 % N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
Green fodder yield	: 400 q/ha
1000 seed weight	: 34.00 g
Grain yield	: 12-14 q/ha
Any other information	:
Green cane yield	: 400-410 q/ha
Juice yield	: 11-12 thousand L/ha
Alcohol yield from juice	: 1450-1500 L/ha
Alcohol yield from grain	: 1850-1870 L/ha
Sugar percentage in juice	: 11.5-12.0
Registration status	: Submitted to PPV & FRA, New Delhi



SORGHUM **PKV Ashwini**



Name of variety	: PKV Ashwini (Wani - 11/6)
Year of release	: 2006
Parents	: Selection from Malkapur wani x SPV 462
Breeding method	: Pedigree
Recommended ecology	: Recommended for rainfed Kharif season for Vidharbha region
Varietal character	: High yielding Wani (parching sorghum) variety with easy threshability, better taste and aroma
Plant height	: 240 - 250
Duration	: 82 days (for dough stage)
Maturity group	: Early
Reaction to major Pests/diseases	: Tolerant to shoot fly, stem borer and leaf diseases
Spacing	: 45 x 15 cm
Plant population	: 1,80,000/ha
Fertilizer dose	: 80:40:40 NPK kg/ha. (50 % N at sowing and 50 % N after 30 DAS)
Seed rate	: 7.5 - 10 kg/ha
Green fodder yield	: 214 q/ha
Any other information	:
Green hurda yield	: 42-43 q/ha
Threshability	: Easy
Sugar percentage in grain	: 13.08
Registration status	: Submitted to PPV & FRA, New Delhi



MAIZE PKVM - Shatak



Name of variety	: PKVM - Shatak (YM - 9005)
Year of release	: 2005
Parents	: Synthetic variety developed compositing inbreds i) Pool 10 AG 10 ii) SI - 19 - HG - 88 A iii) CML - 24 iv) chisumbaje 8923 v) Pop - 500 c - 1
Breeding method	: Mass selection
Recommended ecology	: For Vidarbha region
Varietal character	: Green plant pigment, green leaf, erect canopy, cob tapering at end, compact cob, white seed colour, flat seed shape
Plant height	: 147 - 230 cm
Duration	: 85 - 102 days
Maturity group	: Mid late
Reaction to major	: Moderately tolerant to stem borer, army worm and
Pests/diseases	jassids, tolerant to root rot, bacterial leaf blight, stem rot and leaf spot
Spacing	: 60 x 20 cm
Plant population	: 1,00,000/ha
Fertilizer dose	: 120 : 60 : 30 NPK kg/ha
Seed rate	: 15-20 kg/ha
1000 seed weight	: 18.2-31.7 g
Grain yield	: 48.13 q/ha
Dry fodder yield	: 94.50 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PADDY **SYE - 75**



Name of variety	: SYE - 75
Year of release	: 1978
Parents	: T (N) - 1 x WL-112
Breeding method	: Pedigree
Recommended ecology	: Irrigated transplanted area of assured rainfall like eastern Vidarbha zone of Maharashtra
Varietal characters	: Non-lodging, non-shattering, easy threshability etc.
Plant height	: 96 cm
Duration	: 135-140 days
Maturity group	: Midlate
Reaction to major Pests/diseases	: Moderately resistant to blight
Spacing	: 20 x 15 cm
Plant population	: 3,33,000 /ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 50 kg/ha
1000 seed weight	: 16.5 g
Milling percentage	: 70
Grain type	: Medium slender
Cooking quality	: Acceptable and good
L/B ratio	: 2.56
Grain yield	: 45-50 q/ha



PADDY **SKL - 6**



Name of variety	: SKL - 6
Year of release	: 1978
Parents	: Nagpur-27xIR-8
Breeding method	: Pedigree
Recommended ecology	: Suitable for transplanted rice growing areas of Maharashtra in kharif and summer
Varietal character	: Non-lodging, non-shattering and easy threshability
Plant height	: 97 cm
Duration	: 115-120 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderately resistant to bacterial leaf blight and resistant to blast
Spacing	: 20 x 15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 50 kg/ha
1000 seed weight	: 18.8 gm
Milling percentage	: 65
Grain type	: Long slender
Cooking quality	: Acceptable and good
L/B ratio	: 3.50
Grain yield	: 45-50 q/ha



PADDY **SYE - 1**



Name of variety	: SYE - 1
Year of release	: 1986
Parents	: Sona x Sye 44-3
Breeding method	: Pedigree
Recommended ecology	: U pland condition for eastern Vidarbha zone of Maharashtra
Varietal character	: Non-lodging, non-shattering and easy threshability
Plant height	: 98.0 cm
Duration	: 115-120 days
Maturity group	: Early
Reaction to major Pests/diseases	: Moderate resistant to blast & moderately susceptible to BLB
Spacing	: 20 x 15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 50 kg/ha
1000 seed weight	: 16.6 g
Milling percentage	: 68
Grain type	: Short slender
Cooking quality	: Acceptable and best
L/B ratio	: 3.04
Grain yield	: 40-45 q/ha



PADDY **SKL - 7**



Name of variety	: SKL - 7
Year of release	: 1988
Parents	: T (N) - 1 x Basmati-370
Breeding method	: Pedigree
Recommended ecology	: Irrigated transplanted condition of eastern Vidarbha zone of Maharashtra
Varietal character	: Non-lodging, non-shattering and easy threshability
Plant height	: 100-110 cm
Duration	: 135-140 days
Maturity group	: Midlate
Reaction to major Pests/diseases	: Moderately resistant to blast
Spacing	: 20 x 15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 50 kg/ha
1000 seed weight	: 19.5 gm
Milling percentage	: 72
Grain type	: Long slender and scented
Cooking quality	: Acceptable and good
L/B ratio	: 3.58
Grain yield	: 40-45 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PADDY **SYE - 3**



Name of variety	: SYE - 3
Year of release	: 1990
Parents	: IR - 26 x Zinia-63
Breeding method	: Pedigree
Recommended ecology	: U pland conditions
Varietal characters	: Non-lodging, non-shattering and easy threshability
Plant height	: 86.5 cm
Duration	: 123 days
Maturity group	: Early
Reaction to major pests/diseases	: Moderately resistant to blast and BLB
Spacing	: 20x15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 50 kg/ha
1000 seed weight	: 16.3 g
Milling percentage	: 66
Grain type	: Medium slender
Cooking quality	: Acceptable
L/B ratio	: 2.95
Grain yield	: 40-45 q/ha



PADDY **SYE - 5**



Name of variety	: SYE - 5
Year of release	: 1996
Parents	: SYE-75 x IR-28
Breeding method	: Pedigree
Recommended ecology	: Lowland conditions, suitable for eastern Vidarbha zone of Maharashtra
Varietal character	: Non-lodging, nonshattering and easy threshability
Plant height	: 100 cm
Duration	: 147-154 days
Maturity group	: Late
Reaction to major Pests/diseases	: Resistant to neck blast, moderately resistance to stem, borer leaf borer and WBPH
Spacing	: 20 x15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha.
Seed rate	: 50 kg/ha
1000 seed weight	: 18.5 g
Milling percentage	: 65.3
Grain type	: Short bold
Cooking quality	: Acceptable
L/B ratio	: 2.17
Grain yield	: 45-55 q/ha



PADDY **SYE - 4**



Name of variety	: SYE -4
Year of release	: 1997
Parents	: IR - 8 x WL 112
Breeding method	: Pedigree
Recommended ecology	: Suitable for lowland conditions
Varietal characters	: Non-lodging, non-shattering and easy threshability
Plant height	: 85-90 cm
Duration	: 136-140 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Moderately susceptible to blast & bacterial leaf blight, moderately resistant to neck blast
Spacing	: 20x15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 40 kg/ha
1000 seed weight	: 15.0 g
Milling percentage	: 68
Grain type	: Short slender
Cooking quality	: Acceptable and good
L/B ratio	: 3.30
Grain yield	: 40-45 q/ha



PADDY **PKV HMT**



Name of variety	: PKV HMT
Year of release	: 1998
Parents	: Selection from local strain HMT sona
Breeding method	: Pure line selection
Recommended ecology	: Suitable for transplanted condition in eastern Vidarbha zone of Maharashtra
Varietal character	: Non-lodging, nonshattering and easy threshability
Plant height	: 85-90 cm
Duration	: 135-140 days
Maturity group	: Midlate
Reaction to major Pests/diseases	: Moderately resistant to blast and bacterial leaf blight, MR to pests in field condition
Spacing	: 20x15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 40 kg/ha
1000 seed weight	: 14.5 g
Milling percentage	: 65-68
Grain type	: Short slender
Cooking quality	: Excellent
L/B ratio	: 3.22
Grain yield	: 40-45 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PADDY **SKL - 8**



Name of variety	: SKL - 8
Year of release	: 2000
Parents	: RP (W) 6-17 x Eshwarkora
Breeding method	: Pedigree
Recommended ecology	: Suitable for lowland areas
Varietal character	: Non-lodging, non-shattering and easy threshability
Plant height	: 95-98 cm
Duration	: 140-145 days
Maturity group	: Late
Reaction to major Pests/diseases	: Moderately resistant to blast and bacterial leaf blight, moderately resistant to GM and plant hoppers
Spacing	: 20x15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 50 kg/ha
1000 seed weight	: 22-23 g
Milling percentage	: 64
Grain type	: Long slender
Cooking quality	: Good
L/B ratio	: 3.03
Grain yield	: 45-50 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PADDY **SYE - 2001**



Name of variety	: SYE - 2001
Year of release	: 2002
Parents	: SYE 75 x IR 52
Breeding method	: Pedigree
Recommended ecology	: Transplanted situation in eastern Vidarbha zone of Maharashtra
Varietal character	: Non-lodging, non-shattering and easy threshability
Plant height	: 90-100 cm
Duration	: 130-137 days
Maturity group	: Midlate
Reaction to major Pests/diseases	: Moderately resistant to blast, leaf blight and brown spot diseases, moderately resistant to WBPH, brown plant hoppers and gall midge
Spacing	: 20 x 15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed Rate	: 50 kg/ha
1000 seed weight	: 25 g
Milling percentage	: 73
Grain type	: Short bold
Cooking quality	: Good
L/B ratio	: 2.41
Grain yield	: 45-50 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PADDY **PKV Makarand**



Name of variety	: PKV Makarand
Year of release	: 2003
Parents	: Indrayani x SYE 3-43-57
Breeding method	: Pedigree
Recommended ecology	: Mid early transplanted condition
Varietal character	: Non-lodging, non-shattering and easy threshability
Plant height	: 85-90 cm
Duration	: 123-126 days
Maturity group	: Midlate
Reaction to major Pests/diseases	: Moderately resistant to blast, bacterial leaf blight and gall midge
Spacing	: 20 x15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha.
Seed rate	: 50 kg/ha
1000 seed weight	: 17.3 g
Milling percentage	: 71-72
Grain type	: Medium slender and scented
Cooking quality	: Good
L/B ratio	: 2.91
Grain yield	: 35-40 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PADDY **PKV Ganesh**



Name of variety	: PKV Ganesh
Year of release	: 2003
Parents	: Daya x SKL-6
Breeding method	: Pedigree
Recommended ecology	: Transplanted condition, suitable for eastern Vidarbha zone of Maharashtra
Varietal character	: Non-lodging, Non-shattering and easy threshability
Plant height	: 100-120 cm
Duration	: 126-128 days
Maturity group	: Midlate
Reaction to major Pests/diseases	: Moderately resistant to blast, bacterial leaf blight, gall midge, bio type - 4 and 1 brown plant hopper
Spacing	: 20 x15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha.
Seed rate	: 40 kg/ha
1000 seed weight	: 14.7 g
Milling percentage	: 70
Grain type	: Short slender
Cooking quality	: Good
L/B ratio	: 3.11
Grain yield	: 40-45 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



PADDY **PKV Khamang**



Name of variety	: PKV Khamang
Year of release	: 2007
Parents	: SYE 34-5-40 x Basmati-370
Breeding method	: Pedigree
Recommended ecology	: Transplanted condition, suitable for eastern Vidarbha zone of Maharashtra
Varietal character	: Non-lodging, non-shattering and easy threshability
Plant height	: 91 cm
Duration	: 131 days
Maturity group	: Mid late
Reaction to major Pests/diseases	: Moderately resistant to blast, neck blast, bacterial leaf blight, BPH, GLH, SB, LF and resistant to WBPH and susceptible to GM
Spacing	: 20 x 15 cm
Plant population	: 3,33,000/ha
Fertilizer dose	: 100:50:50 NPK kg/ha
Seed rate	: 50 kg/ha
1000 seed weight	: 17.3 g
Milling percentage	: 70.4
Grain type	: Short slender and scented
Cooking quality	: Acceptable and very good
L/B ratio	: 3.10
Grain yield	: 40-45 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



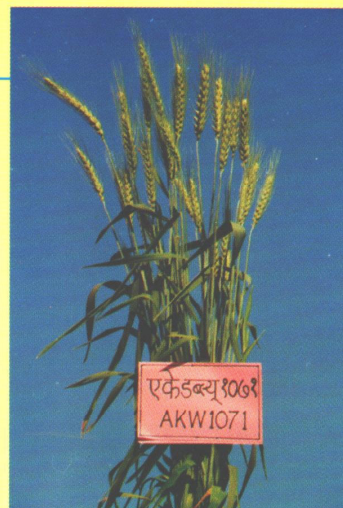
WHEAT **AKW - 381**



Name of variety	: AKW - 381
Year of release	: 1989
Parents	: S-308 x NI-5439
Breeding method	: Pedigree
Recommended ecology	: Vidarbha region of Maharashtra state (Irrigated late and very late sown conditions)
Varietal characters	: Early maturing, wider adaptability, non-lodging and easy threshability
Plant height	: 70-80 cm
Duration	: 90-95 days
Maturity group	: Early
Reaction to major Pests/diseases	: Rust resistance
Spacing /planting distance	: 18.0 cm (row to row)
Plant Population	: 23,00,000/ha
Fertilizer dose	: 90:60:40 NPK kg/ha
Seed Rate	: 125 kg/ha
1000 seed weight	: 44-46 g
Grain type	: Bold
Cooking quality	: Acceptable
Grain yield	: 24-25 q/ha
Dry fodder yield	: 52-54 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



WHEAT **PURNA**



Name of variety	: Purna (AKW-1071)
Year of release	: 1994
Parents	: VEE "S"/FLN-ACC//ANA
Breeding method	: Pedigree
Recommended ecology	: Maharashtra state (Irrigated timely sown conditions)
Varietal characters	: Early growth habit, stem and leaves non-waxy, medium bold grain.
Plant Height	: 85-90 cm
Duration	: 102-110 days
Maturity group	: Medium
Reaction to major pests/diseases	: Rust resistance
Spacing	: 23.0 cm (row to row)
Plant Population	: 21,00,000/ha
Fertilizer dose	: 120:60:40 NPK kg/ha
Seed Rate	: 100 kg/ha
1000 seed weight	: 38-42 g
Grain type	: Medium bold
Cooking quality	: Acceptable
Grain yield	: 35-37 q/ha
Dry fodder yield	: 56-58 q/ha
Registration status	: Regd. No. 166 of 1999 (Registered with PPV & FRA, New Delhi)



WHEAT VIMAL



Name of variety	: VIMAL(AKW-3722)
Year of release	: 2005
Parents	: WH-147/ SUNSTAR*/ CO 80-1
Breeding method	: Pedigree method
Recommended ecology	: Maharashtra State (for timely sown irrigated conditions)
Varietal characters	: Early maturing, dwarf plant height, non-shattering, good grain quality and protein content.
Plant height	: 76-82 cm
Duration	: 105 days
Maturity group	: Early
Reaction to major Pests/diseases	: Rust resistance
Spacing	: 23.0 cm (row to row)
Plant population	: 21,00,000/ha
Fertilizer dose	: 120:60:40 NPK kg/ha
Seed rate	: 100 kg/ha
1000 seed weight	: 39-42 g
Grain type	: Medium bold
Cooking quality	: Acceptable
Grain yield	: 42-44 q/ha
Dry fodder yield	: 58-60 q/ha
Registration status	: Submitted to PPV & FRA, New Delhi



WHEAT **SHARAD**



Name of variety	: Sharad (AKDW-2997-16)
Year of release	: 2005
Parents	: CAPN 6140 / RAJ 1555
Breeding method	: Pedigree
Recommended ecology	: Peninsular zone (Rainfed condition)
Varietal characters	: Dwarf, very good pasta quality
Plant height	: 55-60 cm
Duration	: 105-110 days
Maturity group	: Early - medium
Reaction to major Pests/diseases	: Rust resistance
Spacing	: 23.0 cm (row to row)
Plant population	: 18,00,000/ha
Fertilizer dose	: 40:20:00 NPK kg/ha
Seed rate	: 75 kg/ha
1000 seed weight	: 42-45 g
Grain type	: Medium grain
Cooking quality	: Acceptable
Grain yield	: 12-14 q/ha
Dry fodder yield	: 24-26 q/ha



WHEAT **AKAW - 4627**



Name of variety	: AKAW - 4627
Year of release	: 2009
Parents	: Selection from Vimal (AKAW-3722)
Breeding method	: pure Line selection
Recommended ecology	: Peninsular zone (Irrigated late sown condition)
Varietal characters	: High yeild potential ,early maturity and good protein content.
Plant height	: 80-82 cm
Duration	: 94-96 days
Maturity group	: Early
Reaction to major Pests/diseases	: Rust resistance
Spacing	: 18.00 cm (row to row)
Plant population	: 23,00,000/ha
Fertilizer dose	: 90:60:40 NPK kg/ha
Seed rate	: 120 kg/ha
1000 seed weight	: 38-40 g
Grain type	: Medium bold
Cooking quality	: Good
Grain yield	: 42-44 q/ha
Dry fodder yield	: 55-56 q/ha



Vegetable Crops

CHILLI Jayanti



Name of variety	: Jayanti
Year of release	: 1996
Parents	: Selection from CA-960 population
Breeding method	: Population Improvement
Recommended ecology	: Suitable for kharif season of Vidarbha region of Maharashtra (Hot and dry climate)
Varietal characters	: Semi erect and indeterminate type, semi spreading, foliage green and smooth having angular stem with purple colour spot at joint, flowers white with grayish purple anther, fruit medium size sparsely wrinkled and pointed with sunken part at 2/3 rd length of fruit pericarp from the base
Plant height	: 60-65 cm
Duration	: 212 to 217 days (from transplanting to last) harvesting.
Maturity group	: Medium
Reaction to major pests/diseases	: Susceptible to thrips and mites, moderately resistant to die back and susceptible to powdery mildew diseases. (M.S.)
Spacing	: 60 x 45 cm
Plant population	: 37,000/ha
Fertilizer dose	: 150:50:50 NPK kg/ ha in equal split doses i.e. at transplanting and after 4, 11 & 13 weeks of transplanting
Seed Rate	: 1-1.25 kg/ha
Average yield	: 18-20 q/ha (red ripe chilli)
Quality	: Acceptable medium pungent and red coloured fruits with good capsaicin and ascorbic acid content (44 mg).
Advantage	: High yielding with medium long and red coloured fruits



BRINJAL **Aruna**



Name of variety	: Aruna
Year of release	: 1985-86
Parents	: Selection from local type
Breeding method	: Mass selection
Recommended ecology	: Vidarbha region of Maharashtra (Hot and dry climate), suitable for Kharif and summer cultivation
Varietal characters	: Fruits are small round in shape, fruits are violet colour, fruits, born in clusters
Plant height	: 55-60 cm
Duration	: 210 days
Days to first harvesting	: 90-95 days to first harvesting
Reaction to major Pests/disease	: Showed less susceptibility to little leaf and less incidence of shoot and fruit borer
Spacing	: 75 x 60 cm or 75 x 75 cm
Plant Population	: 17,780/ha
Fertilizer dose	: 60:50:0 NPK kg/ha
Seed Rate	: 700-1000 g/ha
Average yield	: Kharif - 300-350 q/ha Summer - 200-250 q/ha
Advantage	: Suitable for kharif and summer cultivation.



DOLICHUS BEAN

Dasara



Name of variety	: Dasara
Year of release	: 1986
Parents	: Local type
Breeding method	: Selection
Recommended ecology	: Vidarbha region of Maharashtra
Varietal characters	: Growth habit -pole type, fruit coloured with length (8 to 10 cm) and breadth (2 to 2.5 cm), flowers are violet coloured and seeds are whitish in colour with black spot
Plant height	: Pole type
Duration	: 180 - 200 days
Days to first harvesting	: 120 -125 days
Reaction to major Pests/disease	: Less susceptible to bean mosaic virus
Spacing	: 1 x 1 m
Plant Population	: 10,000/ha
Fertilizer dose	: 25:50:00 NPK kg/ha.
Seed Rate	: 8-10 kg/ha
Average yield	: Fresh pods : 100- 125 q/ha Seed - 10- 12 q/ha
Advantage	: Early type as compared to Deepali



DOLICHUS BEAN **Deepali**



Name of variety	: Deepali
Year of release	: 1986
Parents	: Local type
Breeding method	: Selection
Recommended ecology	: Vidarbha region of Maharashtra
Varietal characters	: Growth habit -pole type, pods are flat, creamy in colour with the length (12 to 15 cm) and width (3 to 3.5 cm) and white flowered and seed brown in colour
Plant height	: Pole type
Duration	: 180 - 200 days
Days to first harvesting	: 150 -155 days
Reaction to major Pests/disease	: Less susceptible to bean mosaic virus
Spacing	: 1 x 1 m
Plant Population	: 10,000/ha
Fertilizer dose	: 25:50:00 NPK kg/ha.
Seed Rate	: 8-10 kg/ha
Average yield	: Fresh pods : 125- 150 q/ha Seed - 12- 15 q/ha
Advantage	: Higher yielding as compared to Dasara



ONION Akola safed



Name of variety	: Akola safed
Year of release	: 2005
Parents	: Selection from local white onion
Breeding method	: Mass selection
Recommended ecology	: Suitable for rabi season of Vidarbha region (hot and dry climate)
Varietal characters	: White colour and medium size round shaped bulb
Plant height	: 8.33 cm
Duration	: 183 - 185 days
No. of leaves	: 8-10
Neck thickness	: 0.97 cm
Bulb diameter	: 4.99 cm
Bulb size index	: 20.10
TSS	: 11.68 - 12.30
Dry matter percent	: 12.67
Mean bulb weight	: 72.12 - 128.00 g
Bolting Percent	: 1.00 - 1.66
Joint bulb percent	: 15
Colour bulb	: White
Bulb shape	: Round
Reaction to major pests/disease	: Tolerant to thrips and early blight
Spacing	: 10 x 10 cm for transplanting
Fertilizer dose	: 100:50:00 NPK kg/ha
Seed Rate	: 9-10 kg/ha
Average yield	: 240 - 260 q/ha
Advantage	: High yielding with lower bolted and jointed bulbs percentage and better keeping quality with high TSS



OKRA **Akola bahar**



Name of variety	: Akola bahar
Year of release	: 2005
Parents	: Selection from IC-15537 population
Breeding method	: Mass selection
Recommended ecology	: Suitable for kharif season of Maharashtra
Varietal characters	: Plant are medium tall with short internodal length and minimum branching, leaves are pale green colour, splashes of purple pigmentation present on petiole and lower base of leaves, fruits green, 5 ridges, thin and slender.
Plant height	: 71-100cm
Duration	: 90-100 days
Reaction to major Pests/disease	: Susceptible to thrips and mites and susceptible to YVMV incidence
Spacing	: 60 x 45 cm
Fertilizer dose	: 50:50:00 NPK kg/ha
Seed Rate	: 8-10 kg/ha
Quality	: Fruits are thin and slender
Average yield	: 65-75 q/ha
Advantage	: High yielding, early with better fruit quality



Fruits Crops

ORANGE

Nagpur Mandarin

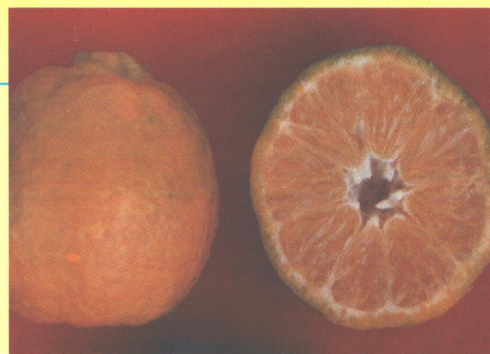


Name of variety	: Nagpur mandarin
Year of release	: 2003
Parents	: Selection from Nagpur Santra
Breeding method	: Selection
Recommended ecology	: Suitable for mandarin growing region of Vidarbha
Varietal characters	: Best performance amongst mandarin varieties and having superior quality fruits, fruits colour is usually orange to deep orange at maturity
Colour of fruits	: Green to deep yelloow orange
Plant Height	: 4.95 m
Plant Volume	: 35.55 m ³
Size (L.B ratio)	: 0.93
Weight of fruits	: 144.20 gm
Juice per cent	: 51.10
TSS per cent	: 10.00
Acidity per cent	: 0.77
TSS/Acidity ratio	: 12.98
Peel Thickness	: 22.76 mm
Reaction to major pests/diseases	: Less susceptible to citrus canker
Spacing	: 6 x 6 m
Plant Population	: 277/ha
Fertilizer dose	: 1200 : 400 : 00 NPK
Fruit yield	: In number- 536/tree In weight - 76.98 kg/tree



ORANGE

Nagpur seedless



Name of variety	: Nagpur seedless
Year of release	: 2003
Parents	: Selection from the existing santra trees,
Recommended ecology	: Suitable for mandarin growing region of Vidarbha
Varietal characters	: Less percentage of seed in fruits, suitable for juice industry
Plant Height	: 4.36 m
Plant Volume	: 24.51 m ³
Colour of fruits	: Green and deep yellow orange
Size (L.B ratio)	: 0.91
Weight of fruits	: 134.20 g
Juice per cent	: 49.60
TSS per cent	: 10.22
Acidity per cent	: 0.79
TSS/Acidity ratio	: 12.93
Peel Thickness	: 22.76 mm
Reaction to major pests/diseases	: Less susceptible to citrus canker
Spacing	: 6 x 6 m
Plant Population	: 277/ha
Fertilizer dose	: 1200 : 400 : 00 NPK
Fruit yield	: In number-476/tree In weight - 61.76 kg/tree



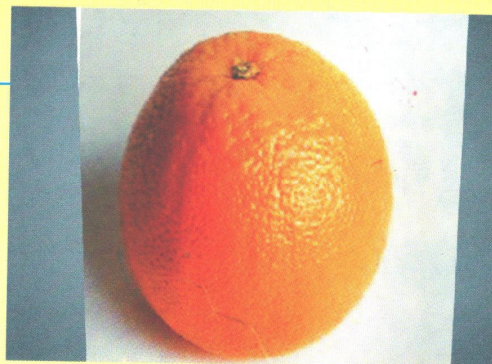
ACID LIME **PDKV Lime**



Name of variety	: PDKV Lime
Year of release	: 2004
Parents	: Selection from existing local Kagzi lime
Breeding method	: Selection
Recommended ecology	: Suitable for Vidharbha region
Varietal Characters	: The fruit is round to oblong smooth and thinned skin or papery rind
Plant Height	: 4.00 to 4.50 meters
Plant Volume	: 34.58 (cu. m)
Colour of fruits	: Yellow
Shape of fruits	: Oval
Size (L.B ratio)	: 1.07 to 1.52
Weight of fruits	: 32.60 to 52.37 g/fruit
Juice per cent	: 50 - 55
TSS per cent	: 7.4 - 7.8
Acidity per cent	: 8.0 - 8.40
TSS/Acidity ratio	: 0.90 to 1.00
Duration	: 25-30 years
Reaction to major pests/diseases	: Less susceptible to citrus canker
Spacing	: 6 x 6 m
Plant Population	: 277/ha
Fertilizer dose	: 600:300:300 gm NPK/plant
Fruit yield	: 2000 - 2500/plant



SWEET ORANGE **Katol Gold**



Name of variety	: Katol Gold
Year of release	: 2005
Parents	: Selection from existing orchard of sweet orange
Breeding method	: Selection from Nucellar
Recommended ecology	: In Vidharbha region
Varietal characters	: Big fruit size with more juice content and maximum TSS
Plant Height	: 5.60 m
Plant Volume	: 58.20 (cu. M)
Colour of fruits	: Golden yellow
Shape	: Roundish
Size (L.B ratio)	: 1.01
Weight of fruits	: 225.17 g
Juice per cent	: 47.32
TSS per cent	: 10.28
Acidity per cent	: 0.74
TSS/Acidity ratio	: 13.89
Peel Thickness	: 4.07mm
Reaction to major	: Low incidence of pest & disease
Pests/diseases	
Spacing	: 6 x 6 m
Plant Population	: 277/ha
Fertilizer dose	: 1200 : 400 : 00 NPK
Fruit yield	: In number – 549.75/tree In weight (kg) 122.33 / tree



TAMARIND **Akola Smruti**



Name of variety	: (Akola Smruti (AKT - 10)
Year of release	: 2007
Parents	: Seedling origin plantation
Breeding method	: Selection
Recommended ecology	: Vidharbha region in Maharashtra state
Plant Height	: 7.50 m
Plant Volume	: 91.520 (cu. m)
Colour of fruits	: Dark red
Shape of fruits	: Slightly curving
Weight of fruits	: 18.53 gm
Bearing habit	- Regular bearing
TSS per cent	: 72.80
Acidity per cent	: 14.43
TSS / Acidity ratio	: 4.56
Fruit length	: 14.73 cm
Fruit breadth	: 2.96 cm
Pulp content	: 47.42 %
Shell content	: 21.96 %
Duration	: 60 - 70 years
Reaction to major pests/diseases	: Very negligible of fruit borer
Spacing	: 10 x 10 m
Plant Population	: 100/ha
Fruit yield	: 1.68 q/plant

