



## Cropwise Improved / Hybrid Varieties of Fruits

### Pomegranate - Ganesh



<b>Release year</b>	1952
<b>Name of Institute / University</b>	RFRS Ganesh khind, Pune
<b>Soil type</b>	Light to medium
<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	---
<b>Seed Rate (Per acre)</b>	700
<b>Crop duration</b>	---
<b>Productivity (t/ha)</b>	10.36
<b>Characters / features</b>	The trees are evergreen in nature with average productivity of 14.00 kg per tree. Fruits are smooth, yellow with red tinge, and round in shape, arils are light pink in colour, TSS % (14.0±0.57 %) and less acidity (0.35±0.32 %) with an average weight (270±27g) and with soft seeded (1.06±0.19 kg/cm <sup>2</sup> ).
<b>Remark</b>	Resistant to the water stress condition and well suited for arid region. It has wide adaptability and bears well in all the seasons. Highly susceptible to blackening, Susceptible to fruit borer, HS to the nematode, MS to the leaf & fruit spot.

### Pomegranate – G-137



<b>Release year</b>	1984
<b>Name of Institute / University</b>	MPKV., Rahuri
<b>Soil type</b>	Light to medium
<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	---
<b>Seed Rate (Per acre)</b>	700
<b>Crop duration</b>	--
<b>Productivity (t/ha)</b>	10.80
<b>Characters / features</b>	Clonal selection from Ganesh made at RFRS, Ganeshkhind, Pune. Evergreen bush with spreading habit. Fruit surface smooth, yellow with red tinge, average fruit weight 330 g. Arils are light pink and sweet in taste. TSS (16.44%), acidity 0.45 % and seed hardness 1.35 kg/cm <sup>2</sup> . Arils are larger than Ganesh.
<b>Remark</b>	Resistant to the water stress condition and well suited for arid region. Highly susceptible to blackening and nematode, susceptible to fruit borer, moderately susceptible to the leaf & fruit spot.



## Mahatma Phule Krishi Vidyapeeth, Rahuri

### Information about Crop wise Improved / Hybrid Varieties Developed by University

#### Pomegranate – P-23

<b>Release year</b>	1986-87
<b>Name of Institute / University</b>	MPKV., Rahuri
<b>Soil type</b>	Light to medium
<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	---
<b>Seed Rate (Per acre)</b>	700
<b>Crop duration</b>	--
<b>Productivity (t/ha)</b>	9.28
<b>Characters / features</b>	Selection from the orchards of Muskat variety around Kolhar/Shirdi region. Fruits are smooth, yellow with red tinge, round in shape, arils are light pink in colour. Average weight of fruit is 340.00 g. Seed mellowness is 1.48 kg/cm <sup>2</sup> TSS (16.50%), acidity is 0.50%.
<b>Remark</b>	Resistant to the water stress, variety is most suited for plantation in medium soil, highly susceptible to the fruit borer & nematode, moderately susceptible to leaf spot & fruit spot.

#### Pomegranate – P-26

<b>Release year</b>	1986-87
<b>Name of Institute / University</b>	MPKV., Rahuri
<b>Soil type</b>	Light to medium
<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	--
<b>Seed Rate (Per acre)</b>	700
<b>Crop duration</b>	---
<b>Productivity (t/ha)</b>	9.85
<b>Characters / features</b>	Fruits are smooth, yellow with red tinge, round in shape arils are light pink in colour Selection from Muskat variety. Average weight of fruit is 315.00 gm. TSS (15.50%) ,acidity 0.45%, Seed mellowness is 1.42 kg/cm <sup>2</sup>
<b>Remark</b>	Resistant to the water stress. Variety is most suited for plantation in medium soil. Highly susceptible to the fruit borer & nematode, moderately susceptible to leaf spot & fruit spot.



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#### Pomegranate – Mridula



	<b>Release year</b>	1994
	<b>Name of Institute / University</b>	MPKV., Rahuri
	<b>Soil type</b>	Light to medium
	<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	--	
<b>Seed Rate (Per acre)</b>	<b>700</b>	
<b>Crop duration</b>	--	
<b>Productivity (t/ha)</b>	10.62	
<b>Characters / features</b>	Plant is an evergreen bush in nature with dark green foliage and spiny branches. Male, hermaphrodite and intermediate flowers are observed. It flowers in all three seasons. Fruits are medium in size (300-350g) with reddish brown skin colour. The arils (sarcotesta) are deep blood red in colour, soft, and sweet in taste.	
<b>Remark</b>	Variety is suitable for long distant market. Resistant to the water stress condition and well suited for arid region.	

#### Pomegranate – Phule Arakta



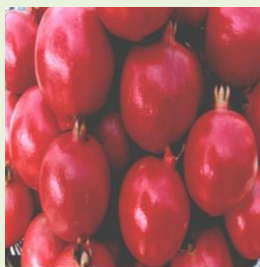
	<b>Release year</b>	2003
	<b>Name of Institute / University</b>	MPKV., Rahuri
	<b>Soil type</b>	Light to medium
	<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	--	
<b>Seed Rate (Per acre)</b>	<b>700</b>	
<b>Crop duration</b>	--	
<b>Productivity (t/ha)</b>	22.07	
<b>Characters / features</b>	Plant is an evergreen bush with dark green foliage and spiny branches. Male, hermaphrodite and intermediate flowers are observed. It flowers in all the three seasons. Fruits are medium (182.70g) in size with red skin colour. The arils are bold with deep blood red colour. The seeds are soft sweet in taste.	
<b>Remark</b>	Resistant to the water stress condition and well suited for arid region Variety is suitable for long distance market.	



## Mahatma Phule Krishi Vidyapeeth, Rahuri

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#### Pomegranate – Bhagwa



	<b>Release year</b>	2003
	<b>Name of Institute / University</b>	MPKV., Rahuri
	<b>Soil type</b>	Light to medium
	<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	--	
<b>Seed Rate (Per acre)</b>	700	
<b>Crop duration</b>	--	
<b>Productivity (t/ha)</b>	22.50	
<b>Characters / features</b>	Fruits are bigger in size (405.00 – 420.00 g). Fruit surface is glossy & attractive saffron rind colour, rind thickness is 0.35 cm, seeds are soft, days for maturity (180-190).	
<b>Remark</b>	Resistant to internal breakdown. Variety is suitable for export in European and domestic market. Moderately susceptible to thrips, leaf spot and fruit spot.	

#### Pomegranate – Phule Bhagwa Super



	<b>Release year</b>	2013
	<b>Name of Institute / University</b>	MPKV., Rahuri
	<b>Soil type</b>	Light to medium
	<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	--	
<b>Seed Rate (Per acre)</b>	700	
<b>Crop duration</b>	--	
<b>Productivity (t/ha)</b>	22.65	
<b>Characters / features</b>	Fruits are medium in size (271.00 – 299.00 g). Fruit surface is glossy, having attractive dark saffron rind colour, rind thickness is 0.35 cm, and seeds are soft. Fruits are more juicy (51.34%) with maximum anthocyanin content (53.12mg/100g). Days for maturity are 176.60. Fruit yield 30.6 kg/tree.	
<b>Remark</b>	Attractive and glossy peel increasing its market value, dark red coloured and attractive arils. Suitable for both export and domestic market.	



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#### Pomegranate – Phule Anardana



	<b>Release year</b>	2015
	<b>Name of Institute / University</b>	MPKV., Rahuri
	<b>Soil type</b>	Light to medium
	<b>Climate</b>	Dry weather ,Less humidity
<b>Sowing Time / Planting period</b>	--	
<b>Seed Rate (Per acre)</b>	700	
<b>Crop duration</b>	--	
<b>Productivity (t/ha)</b>	15.97	
<b>Characters / features</b>	Fruits are more acidic (4.18%) with 14.55% T.S.S., Seeds are hard (Mellowness – 1.51kg/cm <sup>2</sup> ), Arils are bold and attractive blood red in colour, Fruits are medium in size (278.53 g), Fruit surface is attractive red ,Fruit yield 21.59 kg/tree, 15.97 t/ha and average number of 77.55 fruits per tree ,Recovery of anardana 13.95 %, Anardana yield 1.58 kg/plant and 1.17 t /ha., suitable for preparation of anardana.	
<b>Remark</b>	Processed product anardana is rich in vitamin C and mineral, Widely acceptable for its acidic nature and blood red colour arils and other comparable quality characters and yield	

#### Custard apple – Phule Purandar (JWC-1)



	<b>Release year</b>	2014
	<b>Name of Institute / University</b>	AICRP on AZF (Fig & Custard apple), Jadhavwadi, Pune
	<b>Soil type</b>	Light to Medium
	<b>Climate</b>	Hot and dry with mild winter
<b>Sowing Time / Planting period</b>	June -July	
<b>Seed Rate (Per acre)</b>	4x4m for light-medium soil (250 Plants/acre) & 5x5m for heavy soil (160 Plants/acre)	
<b>Crop duration</b>	Perennial	
<b>Productivity (kg/tree)</b>	50.90	
<b>Characters / features</b>	Bigger sized fruits. (366.17 g), Less number of seeds (38.35), more number of carpel's with solid texture, Better organoleptic acceptance, Pleasant aroma, High pulp recovery (47.82%).	



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#### Custard apple – Phule Janaki



<b>Release year</b>	2017
<b>Name of Institute / University</b>	MPKV., Rahuri
<b>Soil type</b>	Light to medium
<b>Climate</b>	Arid region
<b>Sowing Time / Planting period</b>	Planting in Kharif season
<b>Seed Rate (Per acre)</b>	400
<b>Crop duration</b>	--
<b>Productivity (t/tree)</b>	09
<b>Characters / features</b>	Trees are semi-spreading in nature with dark green foliage, Fruits are large in size.(Av. fruit weight 392.71 g), No. of fruits/tree 57.57, Fruit surface is rough with yellowish green colour ,Fruit shape is oval and aeroles are mammal in shape, pulp content (58.96 %), Pulp colour milky white with soft texture less seed content, Fruits are having better sugar- acid blend
<b>Remark</b>	Maximum pulp and less seed content, bigger fruit size, acceptable sugar acid blend and higher yield

#### Fig – Phule Rajewadi (JWF-6)



<b>Release year</b>	2015
<b>Name of Institute / University</b>	AICRP on AZF (Fig & Custard apple), Jadhavwadi, Pune
<b>Soil type</b>	Light to Medium
<b>Climate</b>	Hot & dry climate
<b>Sowing Time / Planting period</b>	June-July
<b>Seed Rate (Per acre)</b>	5x5 m (160 Plants/acre) or 4.5x3 m (296 plants/acre)
<b>Crop duration</b>	Perennial
<b>Productivity (kg/tree)</b>	86
<b>Characters / features</b>	Bigger sized fruits, Suitable for Khatta and Mittha bahar, Attractive purple colour with thick skin fruits, Pinkish red pulp colour suitable for processing, Moderately resistant to rust disease and major pests under field conditions.



## Mahatma Phule Krishi Vidyapeeth, Rahuri

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#### Mango – Sai Sugandh



<b>Release year</b>	1998
<b>Name of Institute / University</b>	Mango Block, Department of Horticulture, Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist. Ahmednagar.
<b>Soil type</b>	Medium to heavy soil, well drained, 1.5 to 2.0 m deep, p <sup>H</sup> range : 6.5-7.5
<b>Climate</b>	Tropical fruit, grows well in frost free sub-tropical region Av. temp: 24-27 °C is ideal for its cultivation. Bright sunny days and moderate humidity during flowering ids ideal.
<b>Sowing Time / Planting period</b>	Onset of monsoon. Grafts are planted in the pits or insitu grafting. Pit size: 1x1x1 m <sup>3</sup>
<b>Seed Rate (Per acre)</b>	40 grafts (10 x10 m)
<b>Crop duration</b>	Fruiting starts after 3 year of planting. Commercial life 60 years
<b>Productivity (kg/tree)</b>	<b>Yield: 150 to 300 fruits per tree (20-40 years)</b>
<b>Characters / features</b>	F1 hybrid, cross between Totapuri x Kesar, Ripe fruits are golden yellow, average fruit weight 380g, acidity 0.23%, Turmeric yellow coloured pulp, pulp content 75 %, Sweet in taste, TSS 22.00 %, Pleasant aroma, Suitable for export and table purpose
<b>Remark</b>	Free from spongy tissue and stone weevil and monoembryonic

#### Mango – Phule Abhiruchi (GKPM-5)



<b>Release year</b>	2014
<b>Name of Institute / University</b>	M.P.KV, Rahuri
<b>Soil type</b>	Light to Medium
<b>Climate</b>	Hot and dry with mild winter
<b>Sowing Time / Planting period</b>	June -July
<b>Seed Rate (Per acre)</b>	9x9m for Low density (50 Plants/acre) & 5x5m for High density (160 Plants/acre)
<b>Crop duration</b>	<i>Ambe bahar</i> (Feb.-June)
<b>Productivity (kg/tree)</b>	45 -50 kg/tree
<b>Characters / features</b>	Mango- <i>Phule Abhiruchi</i> is recommended for pickling purpose in Maharashtra, Growth habit of tree is spreading, Late flowering with fruit. harvesting in rainy season, Fruit colour light green. with thicker pericarp, Fruit with more and whitish flesh, Stone size is small, Fruit acidity 3.00-3.30 %, Fruits per tree 135-280, Fruit weight 240-250 g.



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#### Papaya – Phule Vijaya (Sel. GKPS-2-7)



	<b>Release year</b>	2018
	<b>Name of Institute / University</b>	National Agriculture Research Project., Ganeshkhind, Pune.
	<b>Soil type</b>	Well drained, fertile and 40 cm deep.
	<b>Climate</b>	Tropical, average temperture 25- 30°C, average rainfall 1500 mm.
<b>Sowing Time / Planting period</b>	Planting Time :- In month of June- July, September – October and in February, planting at 2.25 X 2.25 M.	
<b>Seed Rate (Per acre)</b>	Seed requirement per acre : 15 – 20 g.	
<b>Crop duration</b>	Crop duration : 15 – 17 months.	
<b>Productivity (kg/tree)</b>	Production: 75 – 80 Mt/ha.	
<b>Characters / features</b>	Quantative resistance to papaya ring spot disease.	
<b>Remark</b>	Suitable for cultivation in Western Maharashtra	

#### Acid lime – Sai Sharbati



	<b>Release year</b>	1994
	<b>Name of Institute / University</b>	MPKV, Rahuri.
	<b>Soil type</b>	Medium black, water drained & fertile.
	<b>Climate</b>	Tropical, Temp. range between 10-40°C.
<b>Sowing Time / Planting period</b>	Perenial	
<b>Seed Rate (Per acre)</b>	111 seedlings (6 x 6 m spacing).	
<b>Crop duration</b>	Perenial crop.	
<b>Productivity (kg/tree)</b>	46.90 t/ha/year	
<b>Characters / features</b>	Yield - 46.90 t/ha/year, Fruit weight - 49.87 g, Juice percent - 54.51 %, Rind thickness - 1.52 mm, Summer cropping - 24.47 %, Seeds/ fruit - 6.16, Oval smooth fruits with thin rind & uniform size, Tolerant to canker and tristeza	
<b>Remark</b>	Recommended for cultivation in Maharashtra	







## Mahatma Phule Krishi Vidyapeeth, Rahuri

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#### Acid lime – Phule Sharbati

	<b>Release year</b>	2008
	<b>Name of Institute / University</b>	MPKV, Rahuri.
	<b>Soil type</b>	Medium black, water drained & fertile.
	<b>Climate</b>	Tropical, Temp. range between 10-40°C.
<b>Sowing Time / Planting period</b>	Perennial.	
<b>Seed Rate (Per acre)</b>	111 seedlings (6 x 6 m spacing).	
<b>Crop duration</b>	Perennial crop.	
<b>Productivity (kg/tree)</b>	52.19 t/ha/year	
<b>Characters / features</b>	Yield - 52.19 t/ha/year, Fruit weight - 49.77 g, Juice percent - 52.52 %, Rind thickness - 1.95 mm, Summer cropping - 25.42 %, Early Precosity - Since 3rd year, Canopy volume - 86.50 m <sup>3</sup> , Field tolerance to pest and disease particularly citrus, canker	
<b>Remark</b>	Recommended for cultivation in Maharashtra	

#### Sweet orange – Phule Mosambi

	<b>Release year</b>	Release year - 2008
	<b>Name of Institute / University</b>	Name of Institute / University - MPKV, Rahuri.
	<b>Soil type</b>	Soil type - Medium black, water drained & fertile.
	<b>Climate</b>	Climate - Tropical, Temp. range between 10-40°C.
<b>Sowing Time / Planting period</b>	Sowing / Planting period / duration - Perennial.	
<b>Seed Rate (Per acre)</b>	Seed Rate (Per acre) - 111 grafts (6 x 6 m spacing).	
<b>Crop duration</b>	Crop duration - Perennial crop.	
<b>Productivity (kg/tree)</b>	Productivity - 20.12 t/ha/year	
<b>Characters / features</b>	Yield - 20.12 t/ha/year, Fruit weight - 240.96 , Juice percent - 47.37 %, Acidity percent - 0.40 %, Total Soluble Solid (TSS) - 9.66oBrix, Total sugars - 6.98 %, Canopy volume - 27.03 m <sup>3</sup> , Field tolerance to pest and diseases	
<b>Remark</b>	Recommended for cultivation in Maharashtra	



## Mahatma Phule Krishi Vidyapeeth, Rahuri

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#### Banana – Phule Pride



<b>Release year</b>	2018
<b>Name of Institute / University</b>	Mahatma Phule Krushi Vidyapeeth, Rahuri.
<b>Soil type</b>	Medium black
<b>Climate</b>	Tropical Monsoon
<b>Sowing Time / Planting period</b>	June , October, February
<b>Seed Rate (Per acre)</b>	1778
<b>Crop duration</b>	320 days
<b>Productivity (kg/tree)</b>	97 t/ha
<b>Characters / features</b>	Very dwarf, Two months earlier than Grand Nain, Bunch harvest 100 %, Resistant to lodging, Tolerant to sigatoka
<b>Remark</b>	It is possible to take one plant + first Ratoon in 19 months

#### Ber – Phule Shabari



<b>Release year</b>	2019
<b>Name of Institute / University</b>	Zonal Agriculture Research Station, Solapur
<b>Soil type</b>	Medium with good water drainage having soil pH 5.5 to 8.0
<b>Climate</b>	Tropical and sub tropical
<b>Sowing Time / Planting period</b>	June-July
<b>Seed Rate (Per acre)</b>	278 (at 6 x 6 m. distance)
<b>Crop duration</b>	Perennial
<b>Productivity (kg/tree)</b>	26 kg per plant per year
<b>Characters / features</b>	Trees are semi spreading with dark green foliage, period from flowering to harvesting 150-175 days, fruit weight (5.52 g) medium size, fruits attractive yellowish green colour, oval shape and smooth surface, acceptable on the basis of quality, shape, yeidl, sugar acid blend and shelf life, tolerant to fruit borer and powdery midew disease.
<b>Remark</b>	Recommended for release in Maharashtra state.