



Cropwise Improved / Hybrid Varieties of Fruits

Pomegranate - Ganesh



Release year	1952
Name of Institute / University	RFRS Ganesh khind, Pune
Soil type	Light to medium
Climate	Dry weather ,Less humidity
Sowing Time / Planting period	---
Seed Rate (Per acre)	700
Crop duration	---
Productivity (t/ha)	10.36
Characters / features	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 ²).
Remark	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



Release year	1984
Name of Institute / University	MPKV., Rahuri
Soil type	Light to medium
Climate	Dry weather ,Less humidity
Sowing Time / Planting period	---
Seed Rate (Per acre)	700
Crop duration	--
Productivity (t/ha)	10.80
Characters / features	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 ² . Arils are larger than Ganesh.
Remark	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.



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Pomegranate – P-23

Release year	1986-87
Name of Institute / University	MPKV., Rahuri
Soil type	Light to medium
Climate	Dry weather ,Less humidity
Sowing Time / Planting period	---
Seed Rate (Per acre)	700
Crop duration	--
Productivity (t/ha)	9.28
Characters / features	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 ² TSS (16.50%), acidity is 0.50%.
Remark	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

Release year	1986-87
Name of Institute / University	MPKV., Rahuri
Soil type	Light to medium
Climate	Dry weather ,Less humidity
Sowing Time / Planting period	--
Seed Rate (Per acre)	700
Crop duration	---
Productivity (t/ha)	9.85
Characters / features	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 ²
Remark	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



	Release year	1994
	Name of Institute / University	MPKV., Rahuri
	Soil type	Light to medium
	Climate	Dry weather ,Less humidity
Sowing Time / Planting period	--	
Seed Rate (Per acre)	700	
Crop duration	--	
Productivity (t/ha)	10.62	
Characters / features	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.	
Remark	Variety is suitable for long distant market. Resistant to the water stress condition and well suited for arid region.	

Pomegranate – Phule Arakta



	Release year	2003
	Name of Institute / University	MPKV., Rahuri
	Soil type	Light to medium
	Climate	Dry weather ,Less humidity
Sowing Time / Planting period	--	
Seed Rate (Per acre)	700	
Crop duration	--	
Productivity (t/ha)	22.07	
Characters / features	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.	
Remark	Resistant to the water stress condition and well suited for arid region Variety is suitable for long distance market.	



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Pomegranate – Bhagwa



	Release year	2003
	Name of Institute / University	MPKV., Rahuri
	Soil type	Light to medium
	Climate	Dry weather ,Less humidity
Sowing Time / Planting period	--	
Seed Rate (Per acre)	700	
Crop duration	--	
Productivity (t/ha)	22.50	
Characters / features	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).	
Remark	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



	Release year	2013
	Name of Institute / University	MPKV., Rahuri
	Soil type	Light to medium
	Climate	Dry weather ,Less humidity
Sowing Time / Planting period	--	
Seed Rate (Per acre)	700	
Crop duration	--	
Productivity (t/ha)	22.65	
Characters / features	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.	
Remark	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



	Release year	2015
	Name of Institute / University	MPKV., Rahuri
	Soil type	Light to medium
	Climate	Dry weather ,Less humidity
Sowing Time / Planting period	--	
Seed Rate (Per acre)	700	
Crop duration	--	
Productivity (t/ha)	15.97	
Characters / features	Fruits are more acidic (4.18%) with 14.55% T.S.S., Seeds are hard (Mellowness – 1.51kg/cm ²), 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.	
Remark	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)



	Release year	2014
	Name of Institute / University	AICRP on AZF (Fig & Custard apple), Jadhavwadi, Pune
	Soil type	Light to Medium
	Climate	Hot and dry with mild winter
Sowing Time / Planting period	June -July	
Seed Rate (Per acre)	4x4m for light-medium soil (250 Plants/acre) & 5x5m for heavy soil (160 Plants/acre)	
Crop duration	Perennial	
Productivity (kg/tree)	50.90	
Characters / features	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



Release year	2017
Name of Institute / University	MPKV., Rahuri
Soil type	Light to medium
Climate	Arid region
Sowing Time / Planting period	Planting in Kharif season
Seed Rate (Per acre)	400
Crop duration	--
Productivity (t/tree)	09
Characters / features	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
Remark	Maximum pulp and less seed content, bigger fruit size, acceptable sugar acid blend and higher yield

Fig – Phule Rajewadi (JWF-6)



Release year	2015
Name of Institute / University	AICRP on AZF (Fig & Custard apple), Jadhavwadi, Pune
Soil type	Light to Medium
Climate	Hot & dry climate
Sowing Time / Planting period	June-July
Seed Rate (Per acre)	5x5 m (160 Plants/acre) or 4.5x3 m (296 plants/acre)
Crop duration	Perennial
Productivity (kg/tree)	86
Characters / features	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



Release year	1998
Name of Institute / University	Mango Block, Department of Horticulture, Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist. Ahmednagar.
Soil type	Medium to heavy soil, well drained, 1.5 to 2.0 m deep, p ^H range : 6.5-7.5
Climate	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.
Sowing Time / Planting period	Onset of monsoon. Grafts are planted in the pits or insitu grafting. Pit size: 1x1x1 m ³
Seed Rate (Per acre)	40 grafts (10 x10 m)
Crop duration	Fruiting starts after 3 year of planting. Commercial life 60 years
Productivity (kg/tree)	Yield: 150 to 300 fruits per tree (20-40 years)
Characters / features	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
Remark	Free from spongy tissue and stone weevil and monoembryonic

Mango – Phule Abhiruchi (GKPM-5)



Release year	2014
Name of Institute / University	M.P.KV, Rahuri
Soil type	Light to Medium
Climate	Hot and dry with mild winter
Sowing Time / Planting period	June -July
Seed Rate (Per acre)	9x9m for Low density (50 Plants/acre) & 5x5m for High density (160 Plants/acre)
Crop duration	<i>Ambe bahar</i> (Feb.-June)
Productivity (kg/tree)	45 -50 kg/tree
Characters / features	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)



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

Acid lime – Sai Sharbati




	Release year	1994
	Name of Institute / University	MPKV, Rahuri.
	Soil type	Medium black, water drained & fertile.
	Climate	Tropical, Temp. range between 10-40°C.
Sowing Time / Planting period	Perenial	
Seed Rate (Per acre)	111 seedlings (6 x 6 m spacing).	
Crop duration	Perenial crop.	
Productivity (kg/tree)	46.90 t/ha/year	
Characters / features	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	
Remark	Recommended for cultivation in Maharashtra	




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Acid lime – Phule Sharbati

	Release year	2008
	Name of Institute / University	MPKV, Rahuri.
	Soil type	Medium black, water drained & fertile.
	Climate	Tropical, Temp. range between 10-40°C.
Sowing Time / Planting period	Perennial.	
Seed Rate (Per acre)	111 seedlings (6 x 6 m spacing).	
Crop duration	Perennial crop.	
Productivity (kg/tree)	52.19 t/ha/year	
Characters / features	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 ³ , Field tolerance to pest and disease particularly citrus, canker	
Remark	Recommended for cultivation in Maharashtra	

Sweet orange – Phule Mosambi

	Release year	Release year - 2008
	Name of Institute / University	Name of Institute / University - MPKV, Rahuri.
	Soil type	Soil type - Medium black, water drained & fertile.
	Climate	Climate - Tropical, Temp. range between 10-40°C.
Sowing Time / Planting period	Sowing / Planting period / duration - Perennial.	
Seed Rate (Per acre)	Seed Rate (Per acre) - 111 grafts (6 x 6 m spacing).	
Crop duration	Crop duration - Perennial crop.	
Productivity (kg/tree)	Productivity - 20.12 t/ha/year	
Characters / features	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 ³ , Field tolerance to pest and diseases	
Remark	Recommended for cultivation in Maharashtra	



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Banana – Phule Pride



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

Ber – Phule Shabari




	Release year	2019
	Name of Institute / University	Zonal Agriculture Research Station, Solapur
	Soil type	Medium with good water drainage having soil pH 5.5 to 8.0
	Climate	Tropical and sub tropical
Sowing Time / Planting period	June-July	
Seed Rate (Per acre)	278 (at 6 x 6 m. distance)	
Crop duration	Perennial	
Productivity (kg/tree)	26 kg per plant per year	
Characters / features	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.	
Remark	Recommended for release in Maharashtra state.	




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Guava - Phule Amrut (*Psidium guajava L.*)

 <p>Pimble - 1</p>	Release year	2021
	Name of Institute / University	ZARS, Ganeshkhind, Pune
	Soil type	Medium to light, water drained
	Climate	Tropical
Sowing Time / Planting period	June-July	
Seed Rate	1666 plants/ ha, Spacing 3 m x 2 m (High density planting)	
Crop duration	Perennial	
Productivity (kg/tree)	12.76 kg/ tree and 21.27 t/ ha	
Characters / features	Medium fruit size (210.67 – 222.33 g), Red flesh, Fruit surface is glossy & smooth, Greenish yellow skin colour at edible maturity, Pericarp thickness (1.03 cm), Medium soft seed, TSS 11.76 %, Acidity 0.32%, Ascorbic acid (206.41 mg/100g), Lycopene content (4.83 mg/100g).	
Remark	Recommended for release in Maharashtra state.	

Tamarind – Phule Shravani (RHRT-14)

	Release year	2021
	Name of Institute / University	MPKV, Rahuri
	Soil type	Medium to light slight slopping, medium deep
	Climate	Tropical and sub tropical
Sowing Time / Planting period	June-July	
Seed Rate (Per acre)	100 plants/ ha, Spacing 10 m x 10 m	
Crop duration	Perennial	
Productivity	Fruit Yield -78.44 kg/tree, Fruit Yield- 29.73 t/ ha.	
Characters / features	Moderately sweet in taste (34.78 ⁰ B), More pulp percentage (62.23%), Regular bearing habit, bigger and bold frutis (weight of fruit-26.86 g), semi spreading plants.	
Remark	Recommended for Maharashtra State.	