

RESEARCH ACCOMPLISHMENTS

(2013-18)

DIRECTORATE OF RESEARCH

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VIDYAPEETH, AKOLA

**Recommendations for the farmers approved by the
Joint Agresco committee of SAUs during (2012-13 to
2017-18)**

Sr.No.	Name of AGRESCO Sub Committee	No. of Recommendation
1	Natural Resource Management	65
2	Horticulture	53
3	Animal Science and Fisheries	3
4	Basic Sciences, Food Science and Bio Technology	12
5	Plant Protection	40
6	Agril. Engineering	48
	Soil water conservation	11
7	Social Science	23
8	Variety Release Committee for Field Crops	11
9	Variety Release Committee for Horticultural Crops	14
10	Farm Implement Release Committee	16
	Total	296

Recommendations for Farmers

I. Crop Improvement

A. Field crops

1) Cotton: Variety - AKH-9916

- Released in 2014.
- Suitable for Rain-fed,
- yield 12-14q/ha,
- duration 170-180 days
- and resistant to sucking pest



2) Wheat: AKAW-4210-6

1. Suitable for cultivation under IR-LS conditions in Maharashtra State
2. Early Maturity & hence wider adaptability to sowing time
3. Good yield potential (40-42 qt/ha) under IR-LS
4. Non-lodging and easy threshing ability
5. Rust resistant
6. High Iron, Zinc and Manganese content
7. Good chapatti and bread making quality



3) Udid-AKU 10-1

- In Vidarbha region it was found to be superior by 18.34%, 22.81%, 18.14% and 31.87% over the existing checks i.e. TAU-1, AKU-15, TPU-4 and BDU-1 respectively.
 - In Maharashtra it was found to be superior by 16.25%, 18.08%, 13.29% and 25.54% over the existing checks TAU-1, AKU-15, TPU-4 and BDU-1 respectively.
 - Medium bold grain (4.5 g per 100 seed).
 - Early and synchronous maturity (71 days).
 - Resistant to *Macrophomina* blight and moderately resistant to powdery mildew.
 - Identified as a multiple disease resistant source for Stem necrosis, Anthracnose and Root rot in AICRP programme.
- Suitable for kharif planting in Maharashtra



4)Sunflower(Hybrid PDKVSH- 952)

- Higher Seed Yield (15-18.0q/ha).
- Oil Content-36.03%
- Duration 90 days
- Moderately resistant to powdery mildew




5)Kharif Sorghum (AKSV-181 (PDKV KALYANI)


Higher grain yield (35 q/ha).
 Higher fodder yield (153 q/ha).
 Duration-117 days
 Non lodging and shattering
 Resistant to wilting




6)Sorghum Wani 103 (PDKV Hurda Kartiki

	<p>Yield -45 qt/ha (Green Hurda) Green fodder Yield—200qt/ha Duration -90 days Medium duration Non shattering & Non lodging</p>	<p>प्रसारणाकरिता प्रस्तावित वाण (शेती पीके) (५)</p>  <p>ज्वारी वाणी १०३ (पीडीकेव्ही कार्तीकी)</p> <ul style="list-style-type: none"> • हिरव्या हुरड्याची उत्पादकता : ४५ क्वि/हे • हिरव्या वा-याची उत्पादकता : २०० क्वि/हे • कालावधी : ९० दिवस • दाणे न फुटणारा व न लोळणारा • मर रोगास प्रतिकारक • तुडतुडे किडीस सहनशील
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7) Gram AKG-1109(PDKV-Kanchan)

	<ul style="list-style-type: none"> ➤ Yield-18-20qt/ha ➤ Grain size Medium bold ➤ Duration 105-110 days ➤ Suitable for irrigated condition 	<p>प्रसारणाकरिता प्रस्तावित वाण</p>  <p>हरभरा एकेजी-११०९</p> <ul style="list-style-type: none"> • उत्पादन : १८ ते २० क्वि/हे • मध्यम जाड दाण्याचा • कालावधी : १०५ ते ११० दिवस • ओलीताखाली लागवडीस योग्य
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8) Paddy SKL- 2-50-56-45-30-60 (Sakoli-9)

	<ul style="list-style-type: none"> ✓ Midlate duration (130-135 days) ✓ Medium slender grains with test weight 19.06 g. ✓ High head rice recovery (> 64%), good cooking quality and intermediate AC (22.55%) ✓ Promising culture to stem borer ✓ Average grain yield 3873 kg/ha 	<p>प्रसारणाकरिता प्रस्तावित वाण (शेती पीके)</p>  <p>भात साकोली-९ (एसकेएल-२-५०-५६-४५-३०-६०)</p> <ul style="list-style-type: none"> • उत्पादकता : ३८ ते ४० क्वि/हे • कालावधी : १३०-१३५ दिवस • न लोळणारा, न झडणारा • दाण्याचा आकार मध्यम • करपा रोगास मध्यम प्रतिकारक <p>SKL- 2-50-56-45-30-60</p>
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9) Groundnut AK-335


<ul style="list-style-type: none"> ➤ High Seed Yielding: 22-24 qt/ha ➤ Oil yield -48 % ➤ Duration- 110-113 days ➤ Moderate resistance to major diseases (Tikka, Stem rot and Collar rot) ➤ Moderate resistance to major pests (Jassid, thrips and Aphids). ➤ Suitable to grow in rabi-summer season for seed production purpose. 	<div style="text-align: center; background-color: orange; color: white; padding: 2px;"> प्रसारणाकरिता प्रस्तावित वाण (शेती पीके) </div> <div style="text-align: center; background-color: green; color: white; padding: 2px;"> भुईमुग एके-३३५ </div> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px; border: 1px solid green; padding: 5px; background-color: white;"> <ul style="list-style-type: none"> • उत्पादकता: २२-२४ कि/हे • तेलाचे प्रमाण : ४८.०० टक्के • कालावधी : ११०-११३ दिवस • टिककारोगास मध्यम प्रतिकारक </div> </div>
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10) Paddy SYE-503-78-34-2(Tilak)

<ul style="list-style-type: none"> ➤ Duration : 50% flowering 110-112 days with 140-145 Days to seed Maturity (Late Duration) ➤ Fine grain type (Short Slender) having- Test weight - 12.02-13.0 g ➤ Good cooking quality and intermediate Amylose content (22.26 %), high milling (70.40 %) and head Recovery (58.5 %) ➤ Moderately resistant to Stem borer and Plant Hopper. ➤ Moderate reaction to neck blast 	
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11) Soybean AMS-1001 (PDKV Yellow Gold)

<ul style="list-style-type: none"> • In MVT AMS 1001 has shown 24.17 % and 20.58 % increase seed yield over state check MAUS-71 and JS-335 respectively. • In SMVT it has shown 36.01%, 30.58 % and 33.82% increase seed yield over JS-335, JS-97-52 and MAUS-71 respectively. • In AICRP trial AMS-1001 has shown an increase in seed yield by 46.71 % over JS 95-60, 38.29 % over JS 93-05 and 12.91 % over JS-335. • Resistant to root rot/Charcoal rot and Yellow mosaic virus in natural field condition. • Moderate resistant to Girdle beetle and Stem fly . • Medium maturity duration (97 days) • Pod shattering resistance up to 10 days from harvest maturity. • Excellent Fatty acid profile. 	
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	<ul style="list-style-type: none"> • Trypsin inhibitor content is comparatively less (35.79%) 	
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B) Fruit crops

1) Acid lime: Variety - Chakradhar

<p>Released in 2014. Seed less, thorn less, acidity: 5.9% fruit size: medium, ascorbic acid: 30.3mg, yield :18-20t/ha, and peel thickness: 1.02mm</p>		
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2) Acid lime: Variety - PDKV, Bahar

<p>Released in 2014. Fruit size: Big, yield : 30-35 t/ha, peel thickness:1.62mm, juice: 53 % acidity:6.18%, and Ascorbic acid 31.47%</p>		
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3) Mandarin PDKV, Nagpur Santra (PDKV Mandarin-5)

- ✓ Fruit yield: 27 t/ha
- ✓ Fruit wt : Though yield is higher fruit wt is optimum which ranges 142 to 149 g
- ✓ Juiciness : Fruits are juicy and recorded highest juice i.e. 50% which is approximately 3.5 % more compare to Nagpur mandarin
- ✓ TSS and acidity blend : PDKV Mandarin fruits are well blend of TSS and acidity and recorded highest TSS acidity ratio i.e. 14
- ✓ Fruit colour: Attractive apricot –orange colour
- ✓ Fruit bearing : Fruit bearing habit inside canopy also Responds to bahar regulation
- ✓ Growth: Comparatively spreading growth habit



4) Acid Lime PDKV, Trupti (Akola lime-3)

- The fruit : round to oblong, yellow at maturity
- Fruits are large size weighing 59 to 60 g , with average 53.50 g wt of ambia bahar fruits
- Rag percentage : higher 28.73%
- Pulp: light greenish yellow, texture coarse, comparatively moderate juicy (49.75%)
- Flavor good, sour and highly acidic (8.55 %)
- Seed : 9-10 and highly poly embryonic.
- Yield: 25 to 27 tones/ha
- Recovery of Pickle: 67.50%



C) Vegetable crops

1) Turmeric: PDKV Waigaon (GDT-06-02)

- Yield: 260q/ha
- Early maturity(220days)
- Resistant to leaf spot,
- Curcumin:6.7%,
- Attractive colour of powder



2) Brinjal :AKLB-9

- Thorn less,
- Fruit colour: pale green with white streaks,
- Suitable for summer and rainy season
- Early maturity



3) Limabean : AKKLB-2

- a. Long pods
- b. Attractive seed colour and Palatable,
Yield: 35-40q/ha



4) Okra AKOV-107 (PDKV Pragati)

- Morphological marker character of One sided red spot at the base of the petals (Inner side).
- Yield-99 qt/ha
- Duration-100-105 days
- Resistant with Arka Anamika and Parbhani Kranti for Yellow Vein Mosaic Virus.



5) Chilli AKC-406 (Hirkani)

- ✓ Dark Green fruit colour at unripe stage.
- ✓ Dark red fruit at ripe stage (Wet red chilli).
- ✓ Yield- 48qt /ha.
- ✓ It has moderate capsaicin content (330 mg/100 gm).
- ✓ Good colour value (39040 CU) over check Jayanti (33550 CU).



D) Flower crops

1) Gladiolus: PDKV Roshani (AKGL-04-06-A)

- Thick petals and good visual texture
- Longer shelf life.
- Good corm and cormel production potential and better storability
- More florets per spike Resistant to *fussarium* wilt



2) Chrysanthemum :CHR_Mut-05-02(PDKV Ragini)


- New colour pattern i.e. Red tinge on yellow petals
- More number of flowers per plant
- High yield (179.40 q/ha)
- Moderately resistant to *fussarium* wilt




3) Gaillardia PDKV Roshani

	<ul style="list-style-type: none">✓ Attractive white colour flowers✓ Multi-petal flowers✓ Large size of flowers✓ Dwarf plant with more spread✓ High yielding variety	
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4) Chrysanthemum Bijali supers

	<ul style="list-style-type: none">✓ Attractive white colour flowers✓ Multi-petal flowers✓ Large size of flowers✓ Dwarf plant with more spread✓ High yielding variety	
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5) Gladiolus AKGL-04-16 (PDKV GOLD)

	<ul style="list-style-type: none">➤ Long straight spikes (103.5 cm)➤ More number of florets (16.51)➤ Attractive pinkish yellow petals with red splash➤ Ability to produce more corms and cormels➤ More Vase life (10.25 days)➤ Resistant to <i>fusarium</i> wilt	
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I I. New Farm Implement/ Machinery

1) PKV Turmeric Harvester

It is recommended that to use small size tractor drawn PDKV turmeric digger for uprooting the turmeric rhizomes.



2) PDKV green pod shelling machine:

- Capacity of the machine is 25 kg/ha for green pigeon pea pod shelling and 36 Kg/ha for green pigeon pea pod shelling
- It can be operated by 1 hp single phase electric motor
- Shelling efficiency of the machine is 70 % for green pigeon pea pod shelling and 77 % for green pea pod shelling



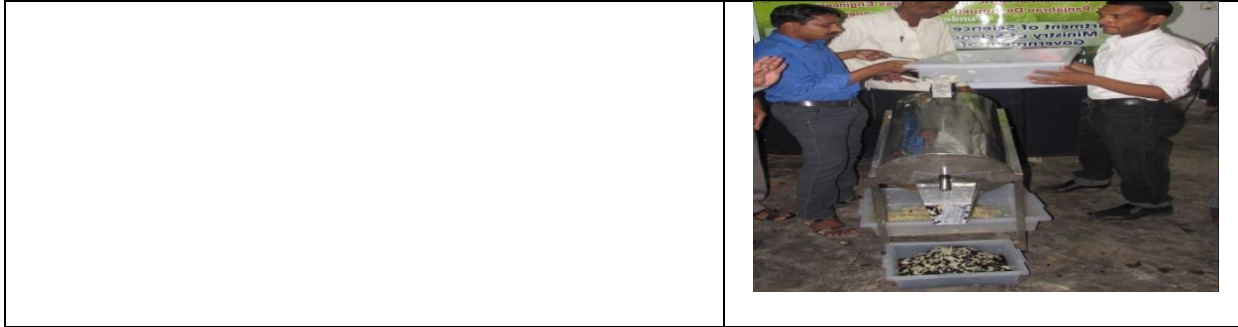
3) PDKV Turmeric slicing machine :

- Capacity of the machine is 350-400 Kg/h
- It can be operated by 1 hp
 - single phase electric motor
- Slice thickness as per requirement can be obtained



4)PDKV de-seeding Machine:

- Capacity of the machine is 50 kg/h
- It can be operated by 0.5 hp single phase electric motor
 - 3.. Easy to operate
- Pulp extraction efficiency is 93 %
 - 5. Pulp contain 75 % flakes



5) PDKV Turmeric Washing Machine

<ul style="list-style-type: none"> ✓ Raw turmeric washing capacity-2.25 q/ha ✓ Washing efficiency-96.19% ✓ Portable and safe to handle ✓ Easy to operate for unskilled labour 	
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6) PDKV hand operated custard apple deseeding Machine

<ul style="list-style-type: none"> ✓ Machine Capacity- 30 kg/hr. ✓ Pulp separation efficiency 95.9% ✓ Pulp recovery-98% ✓ Suitable for small entrepreneurs, farmers 	
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7) Small tractor operated inter row cultivator'

- ✓ It can be useful for small tractor (18.5 HP)
- ✓ It can be use for interculture operation for the crop spacing of 45 cm. with maintaining the depth of operation



8) PDKV Chickpea pod stripper

It is recommended to use PDKV green chickpea pod stripping machine (capacity- 11 kg/h) for green chickpea pod stripping.



9) Manually Operated Seedling Transplanter'

It is recommended to use manually operated seedling transplanter for planting seedlings, Weight of transplanter is 5.8 Kg. Reduces the drudgery during transplanting



10) Integrated PKV Mini Dal Mill'

It is recommended to use Integrated PKV mini dal mill (3 HP) for green gram and black gram split pulses with husk, quality chickpea dehulling and for easiness in splitting, cleaning and grading of dehulled pigeonpea split grain besides milling of pulses.



11) PDKV Green gram wet dehuller

PDKV Wet type dehuller is recommended for dehulling of soaked green gram splits.



12) PDKV small tractor operated seed ferti drill cum interrow cultivator

PDKV small tractor (18.5 - 25 hp) operated seed ferti drill cum interrow cultivator is recommended for sowing and intercultural operation



13) PDKV small tractor operated crop residue disintegrator

PDKV small tractor (18.5 -25 hp) operated crop residue disintegrator is recommended for *in-situ* crop residues management



14) PDKV developed power cutter

Dr. PDKV developed power cutter is recommended to use for cutting sugar cane sets and forage.



15) PDKV Rotary Onion Grader

It is recommended to use PDKV Rotary Onion Grader (Capacity- 20 TPD) for size grading of onions



16) PDKV Jamun pulp extraction machine

PDKV Jamun pulp extraction machine is recommended for the extraction of jamun pulp.

