Presentation before
Hon. Governor of Maharashtra & the Chancellor of the University
Shri Jishnu Dev Varma

Accredited with
'A Grade'
(Score: 3.21/4.00)
by ICAR-NAEAB for 2023–2028

Development in Agricultural Sector in Maharashtra & Initiatives of VNMKV, Parbhani

Prof. Indra Mani
Vice-Chancellor, Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani (MS)

Mandates of the VNMKV, Parbhani

- **Provide education in agriculture, allied sciences & humanities.**
- **Provide research base to improve the productivity of important agri-horticulture, livestock, & agri-allied activities of Marathwada region.**
- **Develop appropriate plans for conservation of natural resources & sustainable use.**
- **Undertake & guide extension education programmes, first line transfer of technology, extend services of training, conduct demonstrations & develop appropriate communication network.**
- **Standardize technologies for crop production, protection, harvesting, marketing, post-harvest utilization, livestock, & allied agro-communities for improving the living standard of farmers, farm workers & women of Marathwada.**
- **Provide the necessary production support of nucleus, breeders & foundation seed of important crops of the region & also generate revenue through large farms for sustainable growth of the University.**

Jurisdiction & Profile of VNMKV, Parbhani

1918 - Cotton Research Station, Parbhani

1928 - Sorghum Research Station, Parbhani

1956 - College of Agriculture, Parbhani

2023 – Four New Constituent Colleges
Maize Research Station, Doiphoda,Dist. CSN
Soybean Research & Processing Center, Parali, Dist. Beed

2024 – Implementation of NEP 2020

Total Land with University 3883.5 ha

Year of establishment	18th May 1972
No. of the Affiliated Colleges (Constituent & Private)	Total Colleges : 59 (55+4) Constituent Colleges : 16 (12+4) Affiliated Colleges : 43
Agri. Tech. Schools (Diploma)	Total ATS : 57 Constituent ATS : 06 Affiliated ATS : 51
Status of ICAR accreditation	Accredited with 'A Grade' (Score: 3.21) by ICAR-NAEAB for 2023–2028
No. of AICRP programs	23
100%ICAR funded schemes	04 (TSP, SCSP)
Other Schemes (State funded)	19 (17+2)
Research Achievements	161 improved & hybrid varieties, 60 farm equipment 1199 recommendations of technologies
No. of KVKs & other extension units	KVKs : 12 RAEECs : 04 ATIC : 01

Cultivated Area : 56.40 lakh ha.
Kharif : 42.80 lakh ha.
Rabi : 20.24 lakh ha
Irrigated Area : 17 %
Medium to Heavy Soil :65 %
Rainfall : 835 mm
Rainfall in monsoon : 80 %

International Green University Award 2023

Nine AICRP Centres bagged National Best Centre Awards
Dryland Agriculture, Cotton, Pearl Millet, Safflower, Oilseeds (Sunflower), IFS, Pulses, Mechanisation of Animal Husbandry, Sorghum

Education – Degree Programs

Sr N	Degree Courses & Intake Capacity	Name of the Degree programmes
1	UG 5310	1. B.Sc. (Hon.) (Agri.) 2. B.Sc. (Hon.) (Hort.) 3. B.Sc. (Hon.) (Community Science) 4. B.Sc. (Hon.) (Agril. Bio-Tech.) 5. B.Sc. (Hon.) (Agri. Business Mgt.) 6. B.Tech. (Agril. Engg.) 7. B.Tech. (Food Technology)
2	PG 411	1. M.Sc. (Agri) (14 Subjects) 2. M.Sc. (Horti) (03 subjects) 3. M.Sc. (Community Sci.) (03 Subjects) 4. M.Sc. (Agril. Bio-Tech.) 5. M.Tech. (Agril. Engg.) (04 Subjects) 6. M.Tech. (Food Process Technology) 7. M.B.A. (Agri.)
3	Ph.D. 88	1. Ph.D. (Agri.) (11 Subjects) 2. Ph.D. (Horti.) (3 Subjects) 3. Ph.D. (Community Sci.) 4. Ph.D. (Agril. Engg.) (4 Sub) 5. Ph.D. (Food Process Technology)

SN	Program	Name of the programmes
1	Diploma	Agri. Technology (2 yrs)
2	Certificate	Gardner Training (1 yr)
3	Certificate	Six Month Professional Course on Agri-Drone (6 months)

- Accredited with **'A Grade'** by ICAR–NAEAB, score 3.21/ 4.00, (April 2023 to March 2028)
- **33rd Rank Indian Institutional Ranking Framework (IIRF)**
- Under the NAHEP, **51 PG students + 24 faculty members** attended the training at reputed institutes across 12 countries, & + 900 PG students / faculty attended training / workshop at reputed institutes in India on digital technologies in agriculture.

1,27,248 Skilled Professional

Research Focus

Major Field Crops

Cotton

Soybean

Sorghum

Pigeon pea

Major Fruit Crops
Banana, Sweet orange
***Keshar* mango, Pomegranate**

Developed Varieties / Technologies by the University

Production Technologies : 1146
Varieties / Hybrids : 160
Machinery & Implements : 60

Focus on Development of Climate Resilient Varieties / Hybrids

Low Water Requirement

- Efficient water-use (high WUE)
- Performs well under rainfed and limited irrigation conditions
- Tolerant to drought and intermittent dry spells

Short Duration / Early Maturity

- Reduced crop duration helps escape terminal drought and heat stress
- Enables double cropping and timely sowing of next crop
- Minimizes exposure to climate extremes

Genetic Improvement in Indigenous varieties

Stable Yield under Climate Stress

- Lower yield fluctuations across seasons
- Ensures food and income security for farmers

Stress Tolerance

- Tolerance to heat, drought, salinity, and flooding
- Improved resilience to pests and diseases under changing climate

Input Efficient

- Performs well with lower fertilizer and chemical inputs
- Compatible with biofertilizers and sustainable practices

Mechanisation Friendly

- Uniform plant height and maturity
- Suitable for direct seeding, zero tillage, and mechanical harvesting
- Reduced labour dependency and cost

India's Mission for Aatmanirbharta in Pulses - Climate Resilient Varieties in Pulses

BDN-711

- Duration : 150-160 Days
- Yield: 16 – 18 qts/ha(Rainfed)
- 25-26 qts/ha (Irrigated)
- Early variety
- Tolerance to wilt & sterility mosaic
- Suitable in Rainfed Area, sustain long dry spell

Impact of BDN 711

Additional benefit of 2500Crs to the farmers due to cultivation of BDN 711 variety only (2016-21).

Approximately more than 4.5 lakh ha pigeon pea area of the State under the cultivation of BDN-711 & BDN-2013-41.

Pigeon pea

BDN-2013-41 (Godawari)

- Duration : 160-165 Days
- Yield : 19-23 qts/ha (Rainfed)
  40-42 qts/ha (Irrigated)
- Tolerance to wilt & sterility mosaic
- Climate resilient variety
- More protein content, Bold seeded

Record Yield
19.50 Qts / Acre on Farmer's Field
Farmer Shri. Hanumant Rokde from village Fisre of Karmala taluka (Solapur)

Progressive farmers harvest a good yield 12 qtls /acre under rainfed conditions & 18 qtls / acre with drip irrigation from 'Godavari.'

Chick pea

BDNG 2018-16 (Parbhani Chana 16)

- **Pedigree: BCP 60 x Vishal**
- **Yield 23 to 30 qts/ha**
- **Maturity 110-115 days**
- **Resistant to wilt disease**
- **Bold seeded with test weight of 30 gm.**
- **Suitable for mechanical harvesting**
- **33 cm pod bearing from ground level**

National Mission on Edible Oils - Climate Resilient Varieties in Oil Seed Crops

Soybean

MAUS 612

- **Early maturity** (95-100 days)
- Three seeded pods
- Moderate resistance to insect pest & diseases
- **Yield 32-35 qts/ha**
- Resistance to drought
- **Highly demanded variety by the farmers Notification in 2018**
- Suitable for Maharashtra State & Southern India

MAUS 725

- Early maturity (90-95 days)
- Four seeded pod
- Resistance to insect & disease
- Sustainable in low rainfall
- Yield : 25-30 qts/ha

MAUS - 731

Early maturity (90-95 Days).
Mostly 3 seeded pods.
Moderately resistance to pest & diseases.
Yield : 28-32qts/ha

MAUS 162

- Duration 100-103 Days
- Yield 25 – 30 qts/ha
- Resistance to Insect & Disease
- Suitable for machine harvesting
- Resistance pod

Total released varieties of soybean = 13

262 MoUs with Private Seed Companies / FPOs for Seed

Pr

Strengthening of oil seed research under Seed Hub Project at Parbhani, Latur, Somnathpur

Safflower

Parbhani -12 (Parbhani Kusum)

Yield – 10-12 Qt/ha (Rainfed)
20-22 Qt. ha (Irrigated)
Oil Content - 29.00%
Duration - 130-135 days

PBNS 221
2
Oil
34.5

Sunflower

Hybrid LSFH -171

Duration : 90-95 days
Oil Content : 34-35%
Yield : 18-20 Qt/ha Rainfed
21-23 Qt./ha Irrigated
Downey Mildew

Linseed

LSL-93 (Latur-93)

High Yielding Variety
Duration – Only 90 days
Early Variety, Recommended for rainfed

Bengal

Climate Resilient Varieties in Cotton & Millets

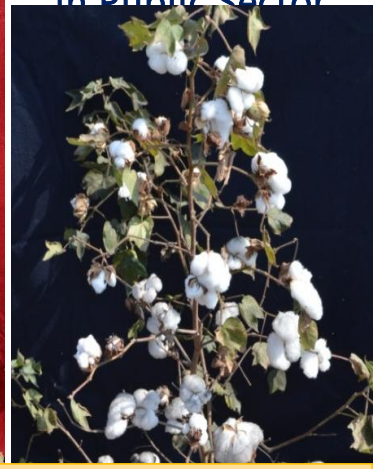
Cotton

NH 1901 BT

NH 1902 BT

NH 1904 BT

NHH-44 hybrid BG-II
First GM Hybrid of Cotton in Public Sector



VNMKV developed 3 American *Bt* cotton straight varieties released for Central Zone of India comprising of Maharashtra, Gujarat & Madhya Pradesh by Central Variety Identification Committee (CVIC)

Clean Cotton Project on 500 acres Fast Retailing India Material Corporation Pvt. Ltd.

Mechanization, Weed Management, High Density Planting

Pearl Millet

Biofortified Hybrids

AHB-1200fe

- Grain yield : 29 qt/ha
- Content : 89 ppm Fe & 45 ppm Zn
- Medium maturity : 80-85 days
- Resistant to Downey mildew
- Released & Notified at National level

AHB-1269fe

- Grain yield : 30 qt/ha
- Content : 91 ppm fe & 43 ppm Zn

BBF technology for Soybean

Yield advantage of 25 to 30 %, Additional Moisture Conservation up to 30 %, Easy Drainage

Sorghum

Parbhani Shakti

1st Biofortified Sorghum Variety

- Grain yield : 36 -40 qts/ha.
- Fodder yield : 75 –80 qts/ha
- Content 45 ppm Fe & 32 ppm Zn
- Useful for eradication of malnutrition, anemia

Standardization of farm pond sizes for 3 agro-climatic zones

+ 50000 farm ponds are constructed in the region during last 3 years & 16000 farm ponds are constructed in last 2 years as per VNMKV model

Major Achievements / Initiatives in Research

New externally funded research projects

DST (2), NASF (1), RGSTC (10), CM fund(8), RKVY (4), & IFFCO (1)

Establishment of State of Art Modern Laboratories

- Soil & plant analysis Lab
- Gene editing, DNA finger printing Lab
- Bt Referral Lab. (transgenic cotton)
- Custard Apple Research & Processing Lab
- 2 Bio-pesticide & Bio-fertilizer Research & Production Labs
- Microclimatic Studies in Crops & Genotypes (Agril Met.)

Industry Connect

- **Clean Cotton Project on 500 acres Fast Retailing India Material Co. Pvt Ltd**
- **Trishul Technology with Jain Irrigation**
- **Research & Seed production with Mahyco**
- **MoU VNMKV + IMC Chamber of Commerce & Industry, Mumbai, to enhance cooperation in Food Processing & investment in the region.**

CSR Funding

- **CSR funding (+ 15 Cr) from PNB for Marathwada Farmers Training Centre**
- **J FARM TAFE for Maharashtra Mechnization Centre (5.5 Cr.)**
- **CNH India (0.5 Cr.) for skilling up in advanced mechanization**

Centre of Excellence

- **CoE on Climate Change at AICRP Agro-Meteorology (Govt. of Maha.)**
- **CoE on Keshar Mango at FRS, Ch. Sambhaji Nagar (Indo-Isreal Project)**
- **CoE on Digital & Sustainable Agriculture (DST)**

National & International Collaborations with Institutes & Industry

- The University has signed MoUs with +10 international institutes.
- MoUs with esteemed national and international organizations, national institutes (+ 40), industries (+ 18), FPOs (+262), Startup (3) NGOs (2) to foster AIG collaboration.

International Networking

- Purdue University (USA) on farm mechanization.
- GIZ (Jermany) for AgriPV research project
- Western Sydney University (Australia) for Dual Degree Program

National / State Level Policy Making

TREM V Committee - Emission Norms for Tractors
Five National Level Committees on Drone SOP & Guidelines
Research Roadmap for State under Viksit Krishi Sankalp Abhiyan 2025
CIDSA Committee to the AI-Enabled Centre

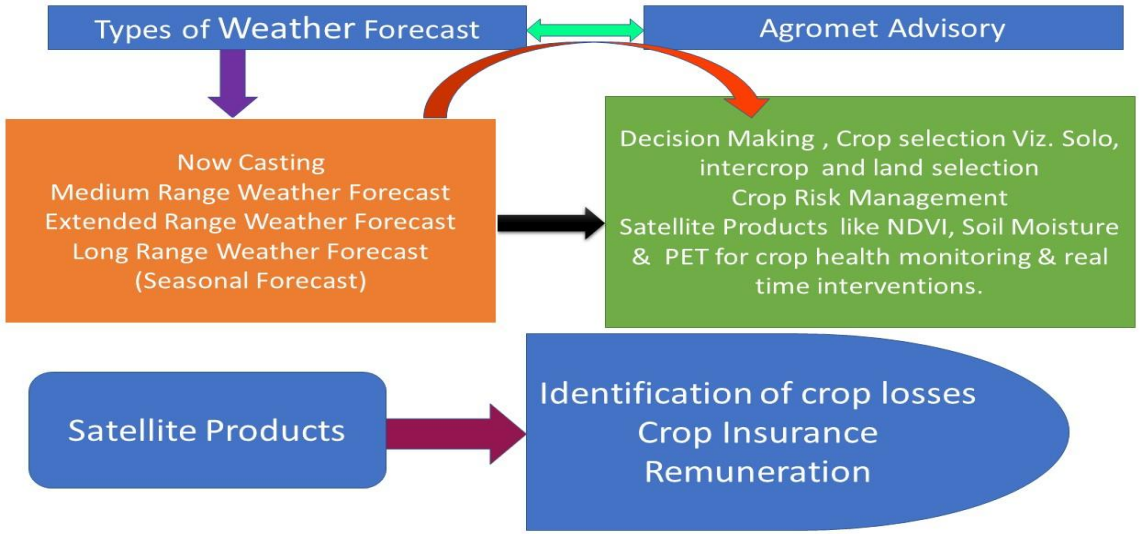
Major Achievements / Initiatives in Digital, AI & Emerging Technologies

- **Promotion of Drone Technology by establishing RPTO, Six-month Professional Certificate Course on Agril. Drones, Custom Hiring Centre for drones**
- **New science domains, including Agri-PV (PhotoAgrivoltaics) with GIZ**
- **AI initiatives : CIDSA, AI3C (5 Cr), Maha Vistaar AI Mobile App, & AI in agriculture-focused Hackathons, Maha AgX Data Sets; AI based Pest & Disease Classification Tool with IIT Powai.**
- **CIC on jaggery, spices & sugarcane juice processing under PMFME Scheme**
- **Value Addition – Custard Apple Research & Processing Unit**

Climate Resilient Strategies
Agromet Advisory Services (Weekly twice)

Dissemination of AAS (mobile apps)

	Dissemination sources	Information
Total farmers benefitted through AAS : + 13 lakh		
1.	**KVK**	Selected farmers in each district/KVK
2.	**WhatsApp Groups**	Each district & 9 blocks in Parbhani district
Initiatives in modes of dissemination		
1.	**Online portal**	DSS (IMD), MahaVISTAAR AI App, Newspaper
2.	**Line dept. officials**	All SDO, TAO, AO
3.	**Social media of University**	University website, University Facebook page, blogs, YouTube channel
Initiatives in content improvement		
1.	**Soil moisture, NDVI & PET Agromet Products from SAC ISRO (Block wise information)**	



Installation of C-Band Doppler Weather Radar (DWR) is in Progress

Significantly improve detection & forecasting of: Extreme rainfall events, Thunderstorms & lightning, Localized weather anomalies

Expected Outcome: Improved **preparedness against extreme weather events**, Strengthened **climate resilience at farm level**

Promotion of Organic & Natural Farming

Particular	Organic & Natural Farming Research & Training Centre
Establishment	2018
Mandate	Research & Training in Organic and Natural Farming
Funding	5 Year State Govt. Funded Project Rs. 500 lakhs
Organic Certified Land	Land - 30.00 ha.
Developed Organic Package of Practices for	Soybean, Gram, Cotton & Pigeon pea; Vegetable Crops: Tomato, Ridge-gourd, & Watermelon
Trainings organized	94
Farmers Trained	28177
Linkage Established	Strong Linkage with Farmers
Area Covered	10,000 ha
Best Farmer Award VNMKV trainees	By RCONF, Nagpur – 02 (2024-25)
Best Centre Award	02 (2022-23, 2023-24)
Online Training Series	Every Tuesday:7.00 to 8.30 pm
Total VNMKV Natural Farming Model Farms	164

One day interactive workshop on Management of Landraces for Climate Resilient Organic & Natural Farming - 874 Trainees

Krushi Sakhi (5-Day Residential Training program) Organized by 12 KVKs, CoA Latur, OFRTC (14 Programs) – 765 Trainees

Introduced a course on Natural Farming, AGRO-233 (Principles & Practices of Natural Farming) with 2 credits (1+1), for UG programmes of the Faculty of Agriculture.

Promotion of Bio Products, Biofertilizers & Biopesticides

Biomix Production Unit (VNMKV, Parbhani)

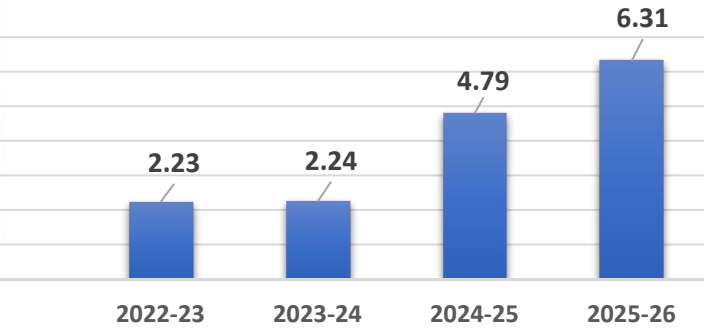
Biomix is a popular bio-input - Consisting of a **consortium of 14 beneficial microorganisms (fungi & bacteria)**.

Supports **plant health management, disease & pest control, nutrient availability, yield improvement**.
Available in **powder and soluble forms**
Used for managing **soil-borne diseases & pests**, in **turmeric, ginger, sweet orange**.
Over the last 5 years,

- Revenue Generated **+ ₹19.74 Cr.**(6.31 Cr 25-26)
- Area Covered +2 **lakh hectares**,
- Farmers Benefited +2 **lakh**

Significantly reducing dependence on chemical pesticides & fungicides.

Revenue Generated by Sale of Biomix (in Cr)



Bio-fertilizers Production Units

Biofertilizer production units at Dept of Soil Sci., Parbhani & NARP KVK, Ch.Sambhaji Nagar

Producing beneficial microorganisms - enhance soil fertility & plant growth.
Production - Rhizobium, Azospirillum, & Phosphobacterium etc.
Tricho Cards for Bollworm control in Cotton at Dept. of Entomology

Farmers Centric Extension

- Special extension programme *"Majha Ek Divasa Majhya Baliraja Sobat"* on second Wednesday of every month - Sept. 2022, +35 episodes, +351 villages +16,000 farm families.
- *Viksit Krishi Sankalp Abhiyan* (VKSA) (29 May–12 June 2025): Inaugurated by the Hon. CM, + 584 villages & +93,072 farmers.
- Regular organisation of online 'Farmer–Scientist Interaction' programs every Tuesday & Friday (evening 6-8 pm), with + 125 episodes, reaching + 16,000 farmers.
- Training on Advanced Farm Mechanization (CNH)
- Maharashtra Mechanization & Irrigation Centre (J-Farm)
- Organized Western Regional Agriculture Fair of 7 states more than 1 lakh participants
- Developed 164 Model Villages of Natural Farming in the Marathwada region.
- Adopted 74 Villages under PoCRA 2.0 Project.
- Connected more than 30 lakh farmers through its social media platforms last year
- Farmer's exposure visits to different state, recognized progressive & innovative farmers with Farmers Fellow, Doctor of Science Awards.

Livelihood Improvement of Weaker Section
+300 Farmers benefitted in 15 villages

Enhancing Safflower Productivity & Livelihood of SC Farmers through FLDs under SCSP

SCSP Project on Farm Mechanization in Plashi Village

TSP – Millet-Based Livelihood Improvement by Sorghum Research Station, Parbhani

Enhancing Livelihood of Tribal Farmers through Water Management Technologies under TSP

Thanks