

Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola-444104 (M.S.)

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From the Vice-Chancellor's Desk. .



This esteemed University is imparting its mandate of education, research and extension education. Education is a character building process, enhancing one's personality and making an individual more rational, capable, responsive and intelligent. We are the institution that is established with the aim of imparting students with knowledge but at the same time my emphasis is to generate creative thinking as well as to explore all such qualities in the students. As a student, creativity is more important than knowledge since creativity allows one to explore ideas with no boundaries. It gives birth to innovation, and provides room for developing practical solutions to real life challenges. Similarly, extracurricular activities including sports, youth festival and other such events brings the best out of them and help them to build and understand the importance of team spirit.

During this particular quarter of July to September, our students undergo several extracurricular activities through Inter-Collegiate sports, research and other events to further represent the University. This University has strengthened the facilities for sports via different grounds, courts and all the necessary infrastructure and material required for respective event. Another important activity is the Research Festival for students in the name of "Avishkar" which is being organized during this quarter every year. My idea is to encourage students to come up with innovative ideas that can help not only to explore their own beings but also can come up with some solutions to the problems faced by farming community. Avishkar, the Research Festival is an opportunity for all the students from UG, PG and Ph.D. of constituent and affillated Colleges under this University.

Dr.PDKV, Akola has developed various advanced technologies for higher production with more sustainable profitability to farmers of Vidarbha agro ecological zone. Some innovative farmers have not only taken initiative to adopt as an extraordinary achievement in different farming arena but also they became leader for transfer of technology to grass root level farming community. On the eve of *Krishidin*, University has nominated five farmers as an ICON farmers of the University and unveiled hoardings in campus area.

I take this opportunity to appeal my students from all Colleges to participate actively in all these events and bring name and fame for their Colleges and ultimately for the University.

Dr. Vilas M. Bhale Vice Chancellor



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Global Organic Convention 2019



Global Organic Convention 2019 was organized dated 15 to 17 September, 2019 on "Natural Resource Management for Sustainable Agriculture, Soil Health and Quality Food" was organized by Society of Agriculture and Development, Nagpur and Center of Organic Research and Training, Dr. PDKV, Akola in association with C and A Foundation, Switzerland, Solidaridad, Netherlands, FiBL, Switzerland and ICAR, New Delhi,

Convention was inaugurated at the auspicious hands of Hon'ble Shri. Nitin Gadkari, Minister for Road, Transport & Highway, Government of India in gracious presence of Hon'ble Dr. Anil Bonde, Minister of Agriculture, Maharashtra and Pro Chancellor, Dr. PDKV, Akola. At this occasion Hon'ble Shri. Prakash Pohare, Chairman, Panjabrao Deshmukh Jaivik Sheti Mission, Maharashtra, Hon'ble Vice Chancellor Dr. V. M. Bhale, Dr. C. D. Mayee, Executive Council Member, Dr. PDKV, Akola, Hon'ble Vice Chancellor, Dr. Ashish Paturkar, MAFSU, Nagpur, Hon'ble Vice Chancellor, Dr. S. D. Sawant, Dr. BSKKV, Dapoli, Dr. S. K. Chaudhary, ADG (Soil Science), Shri. Moreshwar Wankhade, Mrs. Sneha Harde, Mrs. Archana Barabde, Executive Council Member's, Dr. PDKV, Akola, Dr. Ravindra Thakare, Director, VANAMATI were prominently present. In this convention more than 250 participants registered and actively participate in convention.

During three days programme the convention was divided in seven Technical sessions with two Panel discussion and followed by poster session. The first Technical Session was on, "Agronomic Intervention for Organic Agriculture" which was chaired by Hon'ble Vice Chancellor, Dr. V. M. Bhale. In this session total six lead paper presentations were done. The second Technical Session was on, "Soil-Climate-Crop Relationship under organic agriculture scenario" which was chaired by Dr. C. D. Mayee, Former Chairman, ASRB, New Delhi. In this session total five lead paper presentations were done. The third Technical Session was on, "Seeding the Green Future: - An Initiative by FiBL" which was chaired by Hon'ble Vice Chancellor, Dr. V. M. Bhale. In this session total five lead paper presentations were done. The fourth Technical Session was on, "Plant protection in organic agriculture" which was chaired by Hon'ble Vice Chancellor, Dr. S.D. Sawant, Dr. BSKKV, Dapoli. In all, seven presentations were held in this session. The fifth Technical Session was on, "Organic Horticulture Strategies" which was chaired by Director of Research, VNMKV, Parbhani. Dr. D.P. Waskar. In all, three presentations were held in this session. The sixth Technical Session was on, "Certification Market opportunities and standards for organic products" which was chaired by Hon'ble Vice Chancellor, MPKV, Rahuri, Dr. K. P. Vishwanatha. In this session five lead papers and six oral presentations were done. The seventh Technical Session was on, "Biotechnology and farming system approaches under organic farming" which was chaired by Director, VANAMATI, Nagpur, Dr. RavindraThakare.



Workshop on Brain Storming



The one-day Brain Storming workshop on "Role of Agriculture Graduate in 21st Century for sustaining Indian Economy" was inaugurated on 23th July, 2019. This workshop was organized under NAHEP, Dr. PDKV, Akola. In this workshop the total 149 number of participants were registered. This workshop was inaugurated by the hands of Ex. Vice Chancellor, Dr. PDKV, Akola, Dr. V. M. Mayande, and chief guest of the program. Chairman, Dr. Panjabrao Deshmukh organic farming mission, Maharashtra State Hon'ble Shri. Prakashji Phohare, was present as a special guest to grace the occasion. The chairman of the said program was Hon'ble Vice Chancellor, Dr. V. M. Bhale.

In the Chairman's speech Dr. V. M. Bhale, informed that agro-entrepreneurship is an important aspect and the role of agricultural graduate is much important in this aspect. In next green revolution agricultural engineering technology will play a crucial role he added. Further he said that, the university was developed two new variety Viz. AKS 207 and PKV Pink of Safflower. In the university, processing of Safflower for to get the oil & its marketing consists of various activities and students were taken part in these activities he informed. As a student these types of experience is very important for entrepreneurship development in future.

In this workshop Ex. Dean, VNMKV, Parbhani, Dr. R. G. Nadre, Chairman, Gokhale Innovative Training Centre, Jalgoan, Shri. D. C. Gokhale, Director of Research, Dr. V. K. Kharche, and Managing Director, Appa Narayan Agro Vision, Akola Shri. S. B. Nanote has given lectures on different subjects.

Workshop on Technology Innovation Forum

An awareness session for the students of College of Agricultural Engineering and College of Engineering was organized by Society of Automotive Engineers, India. The workshop jointly held on 6th August, 2019 at Department of Farm Power and Machinery, College of Agricultural Engineering and Technology, Dr. PDKV, Akola.

The awareness session aimed at preparing and guiding students for Technology Innovation Forum for



Agriculture Nurturing (TIFAN). The forum holds the annual competition of the students of Engineering and Agricultural Engineering to develop farm machineries, agro-processing machines and tools. This year Forum has given task to "Design Onion Harvesting Machine". Dean, College of Agricultural Engineering and Technology, Dr. M. B. Nagdeve, presided over the programme and in his speech informed students that theoretical knowledge should applied in practical through participation in such Forum. Head Department of Farm Power and Machinery, Dr. S. H. Thakare, explained the importance of TIFAN for designing farm machineries through competition while encouraging the students. Assistant Professor Department of Farm Power and Machinery, Dr. A. K. Kamble, and Test Engineer, Farm Machinery Testing and Training Centre, Er. U. S. Kankal, were present on this occasion. Aiinkva Sahha former Engineer with Mahindra Pune, Akshay Kawale and Akshay Vairale guided students.

Krishi Din Celebrated



Krishi Din (Agriculture Day) was celebrated on the eve of birth anniversary of Late Vasantrao Naik, Former Chief Minister of Maharashtra and pioneer of green revolution at Committee Hall, PDKV, Akola on 1st July, 2019. Hon'ble, Vice Chancellor, Dr. V. M. Bhale was presided over the function. Dr. Bhale narrated the contribution made by Late Vasantrao Naik in agriculture. Scientists and staff members attended the programme.

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MoU with Private Manufacturer



The PDKV Solar light insect trap is developed under UCES & EE, Dr. PDKV, Akola. The MoU has signed between PDKV, Akola and two firms for manufacturing of PDKV Solar light Insect trap on 12.09.2019. PDKV signed MoU with M/s. Fine Trap (India), A-90, MIDC Lohara, Yavatmal (M.S.) and M/s. Sai Agrotech FMD, A-53/2, Additional MIDC, Industrial Area, Yavatmal (M.S.) for manufacturing of PDKV Solar light insect trap.

A meeting of PDKV officials and the two companies was held and MoU was signed. Hon'ble Vice Chancellor Dr. V. M. Bhale, Director of Research Dr. V. K. Kharche, Dean Engg. Dr. M. B. Nagedeve, Registrar Dr. P. R. Kadu, Comptroller Smt. Madhavi Raginwar, Head, UCES & EE Dr. S. R. Kalbande and representative of the company were present at the meeting.

MoU With Value Agro



The memorandum of understanding between Dr. PDKV, Akola and Value Agro has been successfully completed on dated 11th Spet., 2019. Dean, Faculty of Agril. Engg., Dr. M. B. Nagdeve, was chairman of this function. Krishna Kumar M, and Hemasundear D Co-founder Value Agro, Hydrabad was present for this MoU. Dr. P. A. Borkar explained various Post Harvest Processing Machineries developed at AICRP on PHET in his preamble. After wards, Shri. Krishna Kumar M

Co-founder of Value Agro explained the vision of his organization. Value Agro is a new age agribusiness startup that promotes small scale food processing as a rural livelihood activity and works with farmer producer groups to set up agro processing centers that benefits small scale farmers, who produces cereals, pulses, oil seed, spice etc. and provides direct market linkages by selling the processed commodities to bulk B2B(Business to Business), B2C (Business to Consumer) buyers under the brand name of Village Grains.

Unveiled Hordings of Iconic Farmers in University Campus



On the eve of *Krishidin*, University has nominated five farmers as an ICON farmers of the University and unveiled hoardings in campus area at the hand of Hon'ble Vice Chancellor Dr. V. M. Bhale, considering their notable extension works among farmerming community. The nominated ICONIC farmers are Shri. Ravindra Manikrao Metkar (Poultry), Amravati, Shri. Dilip Narayan Fuke (BBF Technology), Wahim, Shri. Vijay Atmaram Ingle (Drip Irrigation), Akola, Shri. Namdeorao Yadavrao Adhav (Onion seed production), Akola and Shri Pandhrinath Yeshwant Gunjkar (Farm Impliments), Buldana District. This innovative initative gives fame to these ICONIC farmers in the society and sustainable technologies of University will dessiminate for adoption by farmers with confidence.

A Tribute to University Martyrs

A shahid din (Martyr Day) was observed on 20th August 2019, by offering garlands and paid tribute to the University Martyrs at the hands of Dean, Faculty of Agril. Engg., Dr. M. B. Nagdeve. Sadbhavana Oath was also given to the staff and students present on the occasion.

On this occasion all University officers, staff and students were present.

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Research Recommendations approved during Joint Agresco - 2019

Released crop varieties

1) Cotton: Suvarna Shubhra (AKH-09-5)

Salient Features

- Average seed cotton yield (Rainfed) - 1300-1600 kg/ha
- 2. Maturity duration 150-160 days
- 3. Boll weight 3.7 4.0 g.
- 4. Staple Length (UHML)- 28-30 mm
- 5. Ginning Out turn- 35-36 % Tolerant to Jassids, *Myrothecium* leaf spot, grey mildew, and Bacterial Leaf Blight diseases

2) Mustard: TAM-108-1

Salient Features

- 1. Yield 09 g/ha
- 2. Oil content: 40 percent
- 3. Duration 101 days
- 4. 1000 seed weight: 5 gms
- 5. Resistant to aphids

Released farm implements

1) PDKV Ajwain and fennel seed extractor Salient Features

PDKV Ajwain and Fennel seed extractor is recommended for extraction of ajwain and fennel seed

- 1. The capacity of Ajwain and Fennel seed extraction is 170 Kg/h.
- 2. The machine is operated on 2 horse power motor.
- 3. Two unskilled labors are required for operation of machine.
- The machine is easily movable from one place to another. The developed machine having higher capacity than traditional method and seed extraction is economical.

2) PDKV loading/unloading device for onions

The PDKV loading unloading device with sorting table along with small inclined belt conveyor and tractor trolley attachment is recommended for loading/unloading of onions into/from onion storage structure

Salient Features

- The capacity of the machine for loading/unloading of onions from onion storage structure is 20 tons per day.
- 2. Loading and unloading machine is operated on 2 Hp motor
- Four unskilled labors are required for operation of machine



- 4. The machine is easily movable from one place to another.
- 5. The developed machine having higher capacity than traditional method and seed extraction is economical.

3) PDKV Solar Biomass Hybrid Dryer Salient Features

It is recommended to use PDKV solar biomass hybrid dryer for continues drying of chilli

- 1. Capacity of dryer: 30Kg/batch
- 2. Thermal Efficiency of dryer: 19.35 %
- 3. Dryer is easy to handle
- 4. Dryer is easy to transport
- 5. Drying capacity is better than traditional drying and also less expensive

4) PDKV solar powered refrigerator

It is recommended to use PDKV solar powered refrigerator at 2 to 8°C and to conserve energy

- 1. Refrigerator Capacity: 60 lit
- 2. Solar powered refrigerator uses nano-refrigerant technology and efficiency of refrigeration is 15 %.
- 3. Suitable for domestic use and vaccine storage
- Refrigerator is operated on solar energy
- Solar powered refrigerator is easy to handle and transport

5) PDKV solar cabinet dryer

It is recommended to use PDKV solar cabinet dryer with phase change material for drying of vegetables and medicinal plants

- 1. Capacity of dryer: 20Kg/batch
- Thermal efficiency of dryer in winter and summer is 46.58 % and 69 % respectively
- This dryer is operated on solar energy
- 4. Dryer is easy to handle and transport
- 5. Dryer capacity is more and cost of operation is less as compared to traditional drying

6) PDKV tractor operated garlic planter

PDKV garlic planter (tractor operated) is recommended for planting of garlic

- 1. The average field capacity of PDKV developed tractor operated garlic planter is 0.40 ha/h.
- 2. A tractor mounted, 10 row, raised bed precision

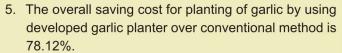






planter was found suitable for planting graded garlic cloves on a raised bed.

- 3. Seed rate of garlic planter is 676 kg per ha.
- 4. Germination percentage of garlic of planter is 78.16 %.

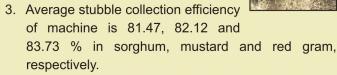




Small Tractor operated folding type stubble collector

is recommended for collection of stubble

- Stubble collector is small tractor operated.
- 2. Average field capacity of stubble collector is 0.30 ha/h.



4. The cost of operation for the collection of stubble by using developed stubble collector is Rs. 856 per ha.

8) PDKV Manual okra seed dibbler

PDKV Manual okra seed dibbler is recommended for more efficient dibbling of okra seeds

- 1. The seed rate of okra seed dibbler is 6 kg per ha.
- 2. Uniform seed to seed placement is possible.
- 3. The cost of planting of okra seed is Rs.250 per ha by using the dibbler.
- 4. This dibbler has more effective field capacity and reduced drudgery as compared to manual dibbling.

9) PDKV Ground nut decorticator (Power operated) PDKV Ground nut decorticator (Power operated) is recommended for Ground nut decortications

- 1. Decorticating efficiency is 89.92 to 93.89 %
- 2. Seed output capacity is 94 to 98 %
- The average seed damage percentage is 2.37, 5.10 and 7.59 in AK-303, TAG-73 and TAG 24 variety respectively.



- 4. Damaged seed, block seed and blown seed is negligible.
- 5. Seed germination percentage is 96 to 97 %
- 6. Suitable for small farmers and small entrepreneurs.

Farmers Mela for Fall Army Worm Management



A farmer's mela was organized on 29th August, 2019 under the Fall Army Worm Management Awareness Campaign in association with South Asia Biotechnology Center, New Delhi, Krishi Vigyan Kendra, Buldhana and State Department of Agriculture, Buldhana and Buldhana Urban Residency Club, Buldhana.

President, South Asia Biotechnology Center, New Delhi and Former Chairman of ASRB, New Delhi, Dr. Charudatta Mayee, Director, South Asia Biotechnology Center, New Delhi, Dr. Bhagirath Chaudhary, was the Chief Guest. Director of Research, Dr. PDKV, Dr. Vilas Kharche., Director, Extension Education, Dr. Dilip Mankar, Head of the Department of Entomology, Dr. Dhanraj Undirwade, SDAO, Buldhana, Shri Santosh Dabre, PC, KVK, Buldhana, Dr. Chandrakant Jaybhaye, Maize Breeder, Dr. Dinesh Kanawade, Principal, ATS, Buldhana, Dr. Satish Jadhav were present at inaugural programme of the farmers Mela.

Dr. Vilas Kharche, in foreword for the programme, explained the purpose of planning of and management of Fall Army Worm in maize crop. He also mentioned that the farmers under the guidance of the Agricultural Research Center, KKV, Buldhana and university scientists of Dr. PDKV. Akola are successful in controlling this pest.

Dr. Dilip Mankar, explained the importance of maize crop in Industry, human diet, animal feed, poultry feed, cosmetics etc. It is an international crop and urged to use integrated management to protect it from the Fall Army Worm.

Dr. Charudatta Mayee in his speech explained that surgical strikes are to be incorporated for controlling the Fall Army Worm. He cited the example of group farming from Aurangabad district for the control of American bollworm, he appealed farmers to go for group farming or community pest management and implement all the tasks from sowing to harvesting for Fall Army Worm control.

Dr. Bhagirath Choudhury in his speech suggested use of pheromone traps, method, time and schedule of spraying pesticides, safe use and management by pesticides and also explained the importance of the integrated pest management.



Dr. Dhanraj Undirwade guided farmers about Fall Army worm and gave visual presentation for control measures for American bollworm to the farmers.

Shri. Santosh Dabre elaborted Departments work for the control of Fall Army worm in Rabi season of the year 2018 and Kharif season 2019. Awareness made by the scientist and the measures taken to control the farmers from time to time. FMC Company Officer Mr. Amol Pinjarkar informed the farmers about the proper use of Coragen pesticides.

16th Scientific Advisory Committee Organized



KVK Sindewahi has organized 15th SAC meeting on 03.07.2018 under the Chairmanship of Director of Extension Education, Dr. D. M. Mankar. In the kindly presence of SDAO, Nagbhid, Division, Shri. D.M. Tapasker, Associate Director of Research, ARS Sindewahi, Dr. U.R. Dongarwar and Shri U. N. Vanve. Progressive farmers and women farmers were attended the meeting. At the onset of the programme, Programme Coordinator, KVK, Sindewahi, Dr. V. G. Nagdevote, has Presented briefs the Progress Report of KVK.

Live web telecast programme on (PM-KMY)



KVK, Yavatmal organized Live Web Telecast Programme on Pradhan Mantri Kisan Mandhan Yojana (PM-KMY) on dated 12 September, 2019 at KVK, Yavatmal. Programme Coordinator, Dr. S. U. Nemade, Progressive Farmer of Yavatmal district, KVK staff were present on this occasion.

ICAR's Best Centre Presentation Annual Award



AICRP on Agroforestry at College of Agriculture, Nagpur under jurisdiction Dr. PDKV, Akola has received the Best presentation award for the year 2018-19 for their better performance in research, extension services rendered to the farmer in the region. Annual workshop of AICRP on Agroforestry (ICAR) was jointly organized by ICAR and Forest College & Research Institute, Tamilnadu Agriculture University (TNAU), Coimbatore from 18-20 Sept 2019.

The award was received by Dr. V. M. Ilorkar, Senior Scientist & Project Head and Dr. Prashant Raut, Junior Scientist with the hands of Dr. S. Bhaskar, Assistant Director General (Agroforestry) ICAR, New Delhi, Dr. Suresh Dean, Faculty of forestry, F.C.R.I. Coimbatore, Dr. Anil Kumar, Director and Dr. A. K. Handa, Nodal officer CAFRI. Jhansi.

Best Agriculture Scientist Award



Dr.R.R.Shelke, Assistant Professor, AHDS was awarded by "Vasantrao Naik Smruti Pratishtan Best Agriculture Scientist Award". In the presence of Ex. Chairman, ASRB, New Delhi Hon'ble Dr. C.D.Mayee, Vice Chancellor, MAFSU, Nagpur Hon'ble Dr. Ashish Paturkar, Ex. Minister and MLA, Hon'ble Shri Manoharrao Naik, Ex. Minister Dr.N.P.Hirani, Ex. MP Shri. Sadashivrao Thakare, Shri. Nilay Naik, MLC, Shri. Deepak Asegaonkar, Chairman of Pratishtan, Dr.P.G.Wasnik, Dean (Dairy Technology) were present.



PDKV Scientists Attended International Symposium



Research Institute of Organic Agriculture (FiBL), Switzerland had organized 2nd International symposium on "Participatory Research to foster Innovation in Agriculture with focus on Organic Cotton" during 27 August to 1st September 2019 at Zurich, Switzerland.

The symposium was specially organized to explore the possibilities of organic interventions for development of quality organic Cotton. The symposium was arranged at Botanical Garden, University of Zurich, Switzerland. Dr. PDKV, Akola is executing project for development of cultivar of cotton using organic resources with financial assistance of FiBL under "Seeding the Green Future" (SGF) Project. Hon'ble Vice Chancellor, Professor Department of Agronomy, Dr.V.M.Bhale, Chief Scientist of COART, Principal Investigator SGF and Nodal officer of PDKV-FiBL Programme, Dr.A.N.Paslawar, Assistant Professor, SSAC, Co-Investigator SGF Project and Coordinator PDKV-FiBL programme, Dr. N.M. Konde and Assistant Cotton Breeder and Co-Investigator SGF Project, Dr.S.B.Deshmukh were involved in the team of scientist.

More than 150 delegates across the world were present for this august gathering. Especially the CEO's of various organizations involved in organic agriculture, like Organic Cotton Accelerator, IFOAM were present. While scientist at Dr. PDKV, Akola and RVSKVV, Gwaliar were attend from India. During symposium the brainstorming was arranged through lead lectures, field visit and Panel Discussion (Fish Bowl) particularly on production of various crops through organic interventions, quality

standards, processing, value chain, marketing, premium prices for organic produce, agenda for participatory research and collaborations at global level for promotion of organic cotton. At the outset Dean University of Zurich and Deputy Director of FiBL had inaugurated the symposium.

PDKV scientists bagged award for best presentation in International Symposium



Research Institute of Organic Agriculture (FiBL), Switzerland had organized 2nd International symposium on "Participatory Research to foster Innovation in Agriculture with focus on Organic Cotton" during 27 August to 1st September 2019 at Zurich, Switzerland. Dr. PDKV, Akola is also taking sincere efforts to develop cultivar of cotton using organic interventions since last two years. The team of scientists consisting Hon'ble Vice Chancellor, Dr. V. M. Bhale, Professor Department of Agronomy, Dr. A. N. Paslawar, Assistant Professor SSAC Dr. N.M. Konde, and Assistant Cotton Breeder, Dr. S. B. Deshmukh, have attended the symposium at Zurich and presented research paper on "Seeding the Green Future: Participatory Cotton Breeding Programme for organic farming and screening genetic diversity of Non GM Cotton". Considering the content, quality and magnitude of the work, the paper has been selected for its excellent work and awarded for its presentation. The award was given to Dr. S. B. Deshmukh, Assistant Cotton Breeder and other co-authors. The Deputy Director of FiBL has awarded certificate, memento and cash prize of 75 Swiss Frank to Dr. S. B. Deshmukh and other team members during the award ceremony held at Botanical Garden, University of Zurich Switzerland

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