



Department of Soil and Water Conservation Engineering

Dr. A. S. College of Agril. Engineering and Technology

Mahatma Phule Krishi Vidyapeeth, Rahuri

Tal. Rahuri 413 722, Dist. Ahmednagar (MS)



Preamble:

The department is associated with teaching for UG, PG and Ph.D. programmes through its experienced and highly qualified staff members working on its regular establishment. The fundamentals associated with land and water engineering are taught in the UG programme leading to B.Tech. degree in Agricultural Engineering. The students are well exposed to theoretical and practical aspects through the lectures and practical's with advanced state of art teaching aids. Recently, the department has planned for post doctoral programme in the university.

The need based applied type of research programmes are carried out through B.Tech, M.Tech and Ph.D students project and ad-hoc Schemes. Since the inception of the department, the research work has been done on the areas viz. watershed development, In-situ conservation of rainwater, rainwater harvesting and utilization policy of harvested water, soil water conservation, Hydrological studies in watershed, Parameter estimation for USLE and other models, Development of different models for hydrological response of watershed, Use of remote sensing and Geographic Information System (GIS) in watershed planning and development. This department has released about 34 recommendations for the benefit of the stakeholders. The staff members of the department are keen in publication of the research finding through the reputed research journals in the country and abroad.

Contact Details: Professor & Head, Dept. of Soil and Water Conservation Engineering,
Dr. A S College of Agril. Engg. & Technology, MPKV, Rahuri
Tal. Rahuri 413 722 Dist. Ahmednagar (MS)
Phone: 02426 243266 E-mail :headswcerahuri@gmail.com

Academic Programmes:

A) B. Tech. (Agril. Engg.)

Capacity of students: 64

Year of start: 1969

B) M.Tech (Soil and Water Conservation Engineering)

Capacity of students: 5

Year of start: 1982

C) Ph.D (Soil and Water Conservation Engineering)

Capacity of students: 2+1*

Year of start: 2011-12

(* in service candidate)

Course Layout:**1. B. Tech. (Agril. Engg.)**

| Sr. No. | Course No. | Credit | Course Title |
|---------|------------------|----------|--|
| 1. | SWCE-121 | 3(1+2) | Surveying and Leveling |
| 2. | SWCE 232 | 3(2+1) | Soil Mechanics |
| 3. | SWCE 233 | 3(2+1) | Watershed Hydrology |
| 4. | SWCE 244 | 3(2+1) | Soil and Water Conservation Engineering |
| 5. | SWCE 355 | 3(2+1) | Soil Conservation Structure Design |
| 6. | SWCE 366 | 3(2+1) | Watershed Planning and Management |
| 7. | CAF – SWCE – 471 | 3(2+1) | Gully and Ravine Control Structures |
| 8. | CAF- SWCE 472 | 3(2+1) | Reservoir and Farm Pond Design |
| 9. | CAF-SWCE-473 | 3(2+1) | Computer application in Soil and Water Conservation Engineering |
| 10. | CAF- SWCE - 474 | 3(2+1) | Remote sensing and GIS application in Natural resources management |
| 11. | CAF- SWCE 475 | 3(2+1) | System Engineering |
| 12. | CAF- SWCE -476 | 3(2+1) | Advance Surface Hydrology |
| 13. | GAE-474 | 5(0+5) | Project |
| 14. | GAE-485 | 25(0+25) | In plant Training |

2. M. Tech. (Soil and Water Conservation Engineering)

| Sr. No. | Subject | Mater's programme |
|---------|------------------------------|-------------------|
| 1. | Major | 20 |
| 2. | Minor | 9 |
| 3. | Supporting | 5 |
| 4. | Seminar | 1 |
| 5. | Research | 20 |
| | Total | 55 |
| | Non Credit Compulsory Course | 6 |

A) Major Subjects (Min. 9 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|---|---------|
| 1. | SWCE 501* | Watershed Hydrology | 3 (2+1) |
| 2. | SWCE 502* | Design of Soil and Water Conservation Structures | 3 (2+1) |
| 3. | SWCE 503* | Open Channel Flow for Runoff Water | 3 (3+0) |
| 4. | SWCE 504* | Watershed Management and Modelling | 3 (2+1) |
| 5. | SWCE 505 | Project Planning for Land and Water Resources | 3 (3+0) |
| 6. | SWCE 506 | GIS and Remote Sensing for Natural Resources Management | 3 (2+1) |
| 7. | SWCE 507 | Land Development and Earth Moving Machinery | 2 (2+0) |
| 8. | SWCE 508 | Advances in Runoff Water Harvesting | 2 (1+1) |
| 9. | SWCE 509 | Fluvial Hydraulics | 3 (2+1) |

| | | | |
|-----|-----------------------|-------------------------------|---------|
| 10. | SWCE 510 | Statistical Hydrology | 3 (3+0) |
| 11. | SWCE 511 | Dams and Reservoir Operations | 3 (2+1) |
| 12. | SWCE 592* | Special Problem | 1 (0+1) |
| 13. | SWCE 595 [#] | Industry/ Institute Training | NC |

* Compulsory for Master's Programme Minimum of Three Weeks Training

B) Minor Subjects (Min. 09 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|---|---------|
| 1. | MATH 501 | Higher Engineering Mathematics | 3 (2+1) |
| 2. | MATH 502 | Methods of Numerical Analysis | 2 (1+1) |
| 3. | MATH 503 | Advanced Calculus for Engineers | 2 (2+0) |
| 4. | STAT 511 | Statistical Methods for Applied Science | 3 (2+1) |
| 5. | STAT 512 | Experimental Design | 3 (2+1) |
| 6. | IDE 504 | Ground Water Engineering | 3 (2+1) |
| 7. | IDE 505 | Crop Environmental Engineering | 2 (2+0) |
| 8. | IDE 507 | Flow through Porous Media | 2 (2+0) |
| 9. | IDE 511 | Introductory Hydro Informatics | 3 (2+1) |

C) Supporting Subjects (Min. 05 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|---|---------|
| 1. | BSCT 501 | Computer Graphics | 3 (2+1) |
| 2. | BSCT 502 | Computer Languages for Engineering Applications | 3 (1+2) |
| 3. | MATH 504 | Neural Network and its Applications | 3 (2+1) |
| 4. | AE 502 | Similitude in Engineering | 3 (2+1) |
| 5. | AE 503 | Applied Instrumentation | 3 (2+1) |
| 6. | FMPE 521 | Computer Aided System Design | 2 (0+2) |

D) Seminar (01 credit)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|------------------|---------|
| 1. | SWCE 591 | Master's Seminar | 0+1=1 |

E) Master's Research (20 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|-------------------|-----------|
| 1. | SWCE 599 | Master's Research | 20 (0+20) |

F) Non Credit Compulsory Courses

| Sr. No. | Course No. | Course Title | Credits |
|---------|-----------------------|--|---------|
| 1. | PGS 501 | Library and Information Services | 1 (0+1) |
| 2. | PGS 502 | Technical Writing and Communications Skills | 1 (0+1) |
| 3. | PGS 503 (e-Course) | Intellectual Property and its Management in Agriculture | 1 (1+0) |
| 4. | PGS 504 | Basic Concepts in Laboratory Techniques | 1 (0+1) |
| 5. | PGS 505 (e-Course) | Agricultural Research, Research Ethics and Rural Development Programmes | 1 (1+0) |
| 6. | PGS 506 (e-Course) | Disaster Management | 1 (1+0) |

3. Ph. D. (Soil and Water Conservation Engineering)

| Sr. No. | Subject | Doctoral Programme |
|---------|--------------------------------|--------------------|
| 1. | Major | 15 |
| 2. | Minor | 08 |
| 3. | Supporting | 05 |
| 4. | Seminar | 02 |
| 5. | Research | 45 |
| | Total credits | 75 |
| | Non credit compulsory courses* | 06 |

* exempted, if completed in Master's degree

A) Major Subjects (Min. 15 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|---|---------|
| 1. | SWCE 601* | Advanced Hydrology | 3 (3+0) |
| 2. | SWCE 602* | Modeling Soil Erosion Processes | 3 (2+1) |
| 3. | SWCE 603 | Soil and Water Systems' Simulation and Modeling | 3 (2+1) |
| 4. | SWCE 604 | Hydrological Analysis of Watershed | 3 (2+1) |
| 5. | SWCE 605 | Hydrological Models | 3 (2+1) |
| 6. | SWCE 606 | Advanced Hydro informatics | 3 (2+1) |
| 7. | SWCE 607 | Risk Management in Soil and Water Conservation | 3 (2+1) |
| 8. | SWCE 693* | Special Problem | 1 (0+1) |
| 9. | SWCE 694* | Case Studies | 1 (0+1) |

* Compulsory

B) Minor Subjects (Min. 8 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|---|---------|
| 1. | AE 601 | Environmental Impact Assessment | 3 (1+2) |
| 2. | AE 602 | Climate Change Impact Adaptation and Mitigation | 3 (2+1) |
| 3. | AE 603 | Research Techniques | 3 (2+1) |
| 4. | AE 604 | Bench Marking and Performance Analysis | 3 (2+1) |
| 5 | IDE 511 | Introductory hydro informatics | 3 (2+1) |
| 6 | IDE 605 | Pipe Network Analysis | 3 (2+1) |
| 7 | IDE 606 | River Basin Models | 3 (1+2) |
| 8 | AE 601 | Environmental Impact Assessment | 3 (1+2) |

C) Supporting Subjects (Min. 5 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|---|---------|
| 1. | BSCT 601 | Object Oriented Programming | 3 (2+1) |
| 2. | MATH 601 | Mathematical Modelling and Mat lab Applications | 3 (1+2) |
| 3. | STAT 609 | Operations Research | 3 (2+1) |
| 4. | STAT 610 | Probabilistic Approach in Design | 2 (2+0) |
| 5. | STAT 611 | Geostatistical Analysis | 2 (1+1) |

D) Seminars (2 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|---------------------|---------|
| 1. | SWCE 691 | Doctoral Seminar I | 0+1=1 |
| 2. | SWCE 692 | Doctoral Seminar II | 0+1=1 |

E) Doctoral Research (45 credits)

| Sr. No. | Course No. | Course Title | Credits |
|---------|------------|-------------------|-----------|
| 1. | SWCE 699 | Doctoral Research | 45 (0+45) |

F) Non Credit Compulsory Courses*

| Sr. No. | Course No. | Course Title | Credits |
|---------|-----------------------|--|---------|
| 1. | PGS 501 | Library and Information Services | 1(0+1) |
| 2. | PGS 502 | Technical Writing and Communications Skills | 1(0+1) |
| 3. | PGS 503 (e-Course) | Intellectual Property and its Management in Agriculture | 1(1+0) |
| 4. | PGS 504 | Basic Concepts in Laboratory Techniques | 1(0+1) |
| 5. | PGS 505 (e-Course) | Agricultural Research, Research Ethics and Rural Development Programmes | 1(1+0) |
| 6. | PGS 506 (e-Course) | Disaster Management | 1(1+0) |

* exempted if completed in Masters degree

Laboratories:

| Sr. No. | Name of the Lab | List of the equipments/ machineries | Subjects/Experiential learning for which it is being used. |
|---------|-------------------------|--|--|
| 1 | Soil Conservation | raingauge, stage level recorder, Coshocton silt sampler, Parshall Flume | Surveying and leveling, soil conservation, Project presentation of UG students |
| 2 | Soil Mechanics | Soil consistency limits, sieve shaker, weighing balance, oven, Compressive strength machine | Soil Mechanics and Soil analysis for UG and PG students |
| 3 | Surveying and leveling | Ranging rods, chain, Plane table set, Theodolite, different types of levels, GPS, compass | Surveying and leveling |
| 4 | Hydraulic tilting flume | Hydraulic tilting flume (15 m length) with arrangements for different slopes, rainfall intensity and soil types, | For laboratory experiments and research work of PG students |
| 5 | Post Graduate Lab | Desktop computers with Surfer, WMS and other related software, LCD Projector | M. Tech and Ph. D students presentation as well as research work |

Soil Conservation Laboratory:



Soil Mechnaics Lab:



Hydraulic Tilting Flume:



Instructional Farm

| Facilities available on the farm | Subjects/Experiential learning for which it is being used. |
|---|--|
| Runoff plot, Automatic weather station, and experimental plot | For UG students research project, soil water conservation Engineering, |



Research Recommendations:

1. In Sub-Montane Zone, under rain fed conditions, single Protective Irrigation from harvested runoff is recommended for finger millet and chillies and if possible, two irrigations for chillies during the period of moisture stress in Agro-ecological situations 3, 4 and 5 having shallow and lighter types of soils ('d' and 'e') and with land slope up to 7%.

(ZARS, Kolhapur)

2. In Sub-Montane Zone, vegetative bonds at a vertical interval of 90 to 100 cm and planted with grasses are recommended for effective soil and moisture conservation for Agro-ecological situations 3,4 and 5 having 'd' and 'e' types of soils with 4 to 8% slope.

(ZARS, Kolhapur)

3. The land treatments of compartment bunding or vegetative barriers of Leucaena (Subahul) at 15 m H.I. across the slope for conserving moisture and reducing runoff and soil loss during kharif are recommended for increasing the yields of rabi sorghum and chickpea in rotation under rainfall zone IV-B comprising of medium black soils of Scarcity Zone of Maharashtra.

(AICRP on Dry Land Agriculture, Solapur)

4. Use of polyhouse of semi circular shape of diameter 3 m prepared with polythene film of 200 micron thickness is recommended at Mahabaleshwar in Western Ghat Zone to reduce mortality of strawberry planting material from heavy rains (6000 mm).

(RWRRS, Mahabaleshwar)

5. The land treatments of tied ridges or open furrow or ridges and furrows for conserving moisture during kharif and increasing yield of rabi sorghum are recommended for medium deep soils in rainfall zones 1 and 4 of Scarcity Zone of Maharashtra.

(ZARS, Solapur)

6. Vegetative barriers of Leucaena along with contour bunds are recommended for shallow soils in rainfall zones 1 and 4 of Scarcity Zone of Maharashtra for soil and water conservation.

(ZARS, Solapur).

7. Inter cropping system of pearl millet + red gram (2+1) is recommended during kharif for medium deep soils in rainfall zones 1 and 4 of Scarcity Zone of Maharashtra for soil and water conservation as well as better monetary returns.

(ZARS, Solapur)

8. Inter cropping system of pearl millet + red gram (2+1) with strip cropping of moth bean (3:1) during kharif or land treatment of ridges and furrows across the slope during kharif with rabi sorghum is recommended for medium deep soils in rainfall zones 1 and 4 of Scarcity Zone of Maharashtra for soil and water conservation as well as better monetary returns.

(ZARS, Solapur).

9. Graded ridges at 3 m HI having triangular cross section of area 900 sq cm and 0.6% grade are recommended on medium deep lateritic soils having slope 5 to 10% in high rainfall area of Western Ghat Zone of Maharashtra.

(RWRRS, Mahabaleshwar)

10. The intensity duration frequency relation, for Ahmednagar and Solapur region, required for determining, intensity of rainfall in Rational Formula as below is recommended for Ahmednagar Region and for Solapur Region.

(Department of SWCE, Rahuri)

For Ahmednagar Region:

$$I = \frac{8.58T^{0.1886}}{(t + 1.0)^{1.0111}}$$

For Solapur Region:

$$I = \frac{11.08 T^{0.1892}}{(t + 1.01)^{1.2006}}$$

Where,

I = intensity of rainfall, cm/h

T = Frequency, year

t = Duration of rainfall, h

11. Mol, Themada, Marvel, Madras Anjan and Dongri grass should be used for vegetative bunds and gully control in the rainfall zones 7, 9 and 12 of Sub-Montane Zone of Maharashtra as these grasses have soil binding abilities.

(ZARS, Kolhapur).

12. Estimation of runoff from developed watershed in Sub-Montane Zone of Maharashtra can be done using following equation.

(ZARS, Kolhapur)

$$Y = 0.2265 X - 87.01$$

Where,

Y = Annual runoff, mm

X = Annual rainfall, mm

13. Eucalyptus plantation at 2 m interval in the trenches of size 3.0 x 0.8 x 0.3 m on the upstream side of contour bunds on 0.5 m VI is beneficial in the eroded waste land having slope 10 to 15% in Scarcity Zone of Maharashtra.

(AICRP on Agroforestry, Rahuri)

14. The Intensity-duration-frequency relation, for Kolhapur region, required for determining intensity of rainfall in Rational Formula as below is recommended.

(ZARS, Kolhapur)

$$I = \frac{3.34T^{0.2109}}{(t + 0.3)^{0.7794}}$$

Where,

I = Intensity of rainfall, cm/h

T = Frequency, year

t = Duration of rainfall, h

15. Continuous contour trenches with 0.2 % grade to channel bed are recommended for hilly uncultivable wasteland in Western Ghat Zone of Maharashtra.

(ZARS, Igatpuri)

16. The vegetative barriers of Madras Anjan (*Cenchrus ciliaris*) at 30 meter horizontal spacing consisting three rows 15 cm apart across the slope is recommended on medium deep soil having 2 percent slope for better moisture conservation, higher crop yield and for easy cultivation practices of crop in rainfall zone 1 and 4 of scarcity zone of Maharashtra.

(Soil Engineer, ZARS, Solapur, 2009-10)

17. The equation, $Y = 2.948 - 0.096 Ca + 0.139 Rf - 0.012 I_{30}$ is recommended for estimating the soil loss from medium deep soils up to 1 % slope under different crop covers with across the slope cultivation [Where, Y = Soil loss during each rainstorm (kg/ha), Ca = Crop canopy cover (%), Rf = Storm rainfall (mm) and I_{30} = Maximum 30 minute rainfall intensity of the storm (mm/h)].

(AICRPDA, Solapur, 2010-11)

18. In scarcity zone of Maharashtra for in- situ rain water conservation on Inceptisol, contour ploughing and opening of ridges and furrows in kharif with hoeing at 3rd, 5th and 8th week after sowing of rabi sorghum is recommended for higher grain and fodder yield, monetary returns and B:C ratio of dry land rabi sorghum.

(Soil Engineer, ZARS, Solapur, 2010-11)

19. From the analysis of 28 years rainfall data, the constants K, a, b and d of rainfall intensity–frequency–duration (IFD) equation for Solapur region are modified as 6.96, 0.2313, 1.00 and 1.1081.

The equation is,

$$I = \frac{6.96T^{0.2313}}{(t + 1.00)^{1.1081}}$$

(AICRPDA Solapur, 2012)

20. In scarcity zone of Maharashtra, for obtaining higher yield of pigeonpea, monetary benefit also for effective *in-situ* moisture conservation, application of recommended dose of nutrient (12.5: 25 kg ha⁻¹ N: P₂O₅) with one hoeing after third week and opening of 30 cm deep furrow at fourth week after sowing in between two rows with the help of wooden plough is recommended.

(Soil Engineer, ZARS, Solapur, 2012)

21. It is recommended to desilt the cement *nala* bunds after every five years to retain its storage capacity.

(AICRPDA, Solapur, 2013)

- 22) The combination of models viz. inflow simulation using HEC-HMS model, crop-water demand model and optimization model based on Linear Programming (LP) technique developed by Mahatma Phule Krshi Vidyapeeth, Rahuri and Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola is recommended for deciding the optimum storages capacity of rainwater harvesting storage tanks in agricultural watersheds under Sub- montane zone of Maharashtra.

(Department of SWCE Rahuri and Department of SWCE Dr. P.D.K.V. Akola, 2014)

- 23) In Sub- montane zone of Maharashtra sugarcane species viz. *Saccharum spontaneum* (SES-37A) and *Saccharum officinarum* (IJ 76-501) with good soil binding abilities are recommended for effective control of small and medium gullies in combination with regular structures in upper catchment.

(Department of SWCE Rahuri, 2014)

- 24) Computer software developed by Mahatma Phule Krishi Vidyapeeth “Phule Runoff Estimator” is recommended for calculation of volume and peak rate of runoff.

(Department of SWCE Rahuri, 2015)

- 25) The revised location constants K, a, b and d in rainfall intensity-duration-return period relationship for Solapur region have been recommended as 3.1318, 0.2890, 0.25 and 0.8802 respectively.

(Department of SWCE Rahuri, 2017)

- 26) The revised location constants K, a, b and d in rainfall intensity-duration-return period relationship for Kolhapur region have been recommended as 3.8472, 0.1745, 0.20 and 0.7959 respectively.

(Department of SWCE Rahuri, 2017)

- 27) The location constants K, a, b and d in rainfall intensity-frequency-duration relationship for Pandharpur region have been recommended as 3.08, 0.2295, 0.8 and 0.9573 respectively.

(AICRPDA, Solapur, 2017)

- 28) The Hydrological Index Method (Modified Tennant method) is recommended for allocating Environmental flow requirement on monthly basis. Furthermore based on Modified Tennant method, the Effective Flow Requirement (EFR) at Mula dam and Panegaon be as depicted in the following table for sustaining riverline ecology.

| Month | EFR for Mula Dam (cumec) | EFR for Panegaon (cumec) |
|-----------|-----------------------------|-----------------------------|
| June | 1.94 | 2.93 |
| July | 15.49 | 39.77 |
| August | 17.78 | 288.89 |
| September | 10.81 | 237.08 |
| October | 19.17 | 226.54 |
| November | 0.010 | - |

(Department of SWCE Rahuri, 2017)

29) It is recommended that Mula river water at downstream side of Mula Dam from Rahuri Khurd to Panegaon contains higher E-coli Pathogenic bacteria as per BIS Standards. Hence river water at downstream side of Mula dam is not suitable for drinking purpose.

(Department of SWCE Rahuri, 2017)

30) The location specific constants of rainfall Intensity-Duration-Frequency relationship developed for Rahuri station can be updated after 10 years and for Solapur station after 5 years.

(Department of SWCE Rahuri, 2018)

31) The location constants K, a, b and d in rainfall intensity-frequency-duration relationship have been recommended as 3.58, 0.1878, 0.6 and 0.8408 respectively for Jalgaon region.

$$I = \frac{KT^a}{(t + b)^d}$$

Where, I= rainfall intensity, cm/hr; T = return period, yr; t = duration, h;

K, a, b and d = Location specific constants

(AICRPDA-AE-Solapur_2018)

32. The bamboo spp. *Dendrocalamus strictus* is recommended for planting for effective control of small and medium types of gullies in combination with regular structures on hill slopes of watershed area.

(ZARS, Kolhapur, 2019)

33. Harvesting of the runoff in farm pond during rainy season and utilization of harvested water as protective irrigation during 35 to 41MW (27th August to 14th October) for *kharif* crop during the dry spells at flowering stage and or for *rabi* crops during the dry spells at initial development stage in scarcity zone of Maharashtra is recommended.

(AICRP, Dry Land Agriculture, ZARS, Solapur, 2019)

34. The location specific constants of rainfall Intensity-Duration-Frequency relationship developed for Aurangabad, Buldhana, and Parbhani stations can be updated after 5 years, for Akola station after 10 years and for Amravati station after 15 years.

(Deptt. of SWCE, MPKV, Rahuri, 2019)

Extension Activities:**Research Paper Published in Journal NAAS rating > 5**

| Sr. No | Title of Paper | Name of Journal | Name of Author | Year of Publication | NAAS rating |
|----------------|---|--|--|--|--------------------|
| 2017-18 | | | | | |
| 1. | Identical linear reservoir model of geomorphologic instantaneous unit hydrograph: A review | Indian Journal of Soil Conservation | Atre, A.A., D.V. Pandit and M.G. Shinde | 2017 | 5.20 |
| 2. | Development of rainfall intensity nomograph for Kolhapur station (Maharashtra) | Journal of Soil & Water Conservation | V. N. Barai, and R. K. Kshirsagar | Oct-Dec. 2017.16 (4):365-369 | 5.08 |
| 3. | Urban Organic Solid Wastes as Farmland Manure and Fertilizers: A Review | International Journal of Current Microbiology and Applied Sciences | P.M. Ingle, H.N. Bhange, B.K. Gavit and R.C. Purohit | 2017 | 5.38 |
| 4. | Urban Solid Waste Management for Sustainability: A Case Study | International Journal of Current Microbiology and Applied Sciences | H.N. Bhange, P.M. Ingle, B.K. Gavit and P.K. Singh | 2017 | 5.38 |
| 5. | Energy Production through Co-fermentation of Organic Waste and Septage in Nashik City, India | International Journal of Current Microbiology and Applied Sciences | B.K. Gavit, H.N. Bhange, P.M. Ingle and R.C. Purohit | 2017 | 5.38 |
| 6. | Determination of geomorphological characteristics of Karpi-Kalu watershed using GIS techniques. | Journal of Pharmacognosy and Phytochemistry | R.D. Bansod and G.S. Ajbe | 2018 7(1): 1940-1944 | 5.21 |
| 7. | Evaluation of Morna river catchment with RS & GIS technique | Journal of Pharmacognosy and Phytochemistry | R.D. Bansod and U.M. Dandekar | 2018 7(1): 1945-1948 | 5.21 |

Research Paper Published in Journal

Period 2013-14 to 2017-18

| Sr. No | Title of Paper | Name of Journal | Name of Author | Year of Publication | NAAS rating |
|----------------|--|---|--|----------------------------------|-----------------------|
| 2013-14 | | | | | |
| 1. | Evaluation of different grasses for their soil binding and soil aggregation properties | Journal of Agriculture Research and Technology | G.L. Chunale, D.D.Pardhe and R.D.Bansod | 2013 | 4.18 |
| 2. | Determination of Statistical characteristics of stream flow of Tungabhadra River, Karnataka, India | Ecology Environment and Conservation | Mallikarjuna and A.A. Atre | 2013 | 4.89 |
| 3. | Soil loss prediction model under different land uses in scarcity zone of western Maharashtra | International Journal of Agriculture Engineering | Sthool, V.A., S.K. Upadhye, R. V. Sanglikar, A.A. Atre, and J.R. Kadam | 2014 | 4.43 |
| 4. | Application of temporal disaggregation model for Tungabhadra River in stream flow generation | International Journal of Agriculture Engineering | Mallikarjuna and A.A. Atre | 2014 | 4.43 |
| 5. | Generation of annual stream flow for Tungabhadra River using AR model | Ecology Environment and Conservation | Mallikarjuna and A.A. Atre | June 2014 | 4.89 |
| 6. | Studies on splash erosion under simulated rainfall | International Journal of Agriculture Science | Barai, V.N., G. U. Satpute and A.A. Atre | June, 2014 | -- |
| 7. | Studies on spreading of splash material under simulated rainfall | International Journal Advancements in Res. &Tech. | Barai, V.N., G. U. Satpute and A.A. Atre | 2014 | -- |
| 8. | Preparation of soil map using remote sensing and GIS technology. | Scientific Journal Agricultural Engineering | Patwardhan Ashwini and Bhau Gavit | (2014) Year XXXIX No.3, 13 – 19. | -- |
| 2014-15 | | | | | |
| 1. | Effect of mulching on cucumber | Jr. of Agril. Research and Technology | A.S.Patwardhan and R.D.Bansod | 2014 Vol. 2 | 4.18 |
| 2. | Development of soft tool for estimating direct runoff from watersheds | Int.Jr.of soft computing and Engg (IJSCE) | V.S.Malunekar, M.G. Shinde, R.D.Bansod, A.A.Atre | 2015 Vol.5(1):110-111 | Impact Factor 4.96 |
| 3. | Disaggregation Models For Ten Daily Stream Flows Of Godavari River | Journal Of Ecology, Environment | Balsane, Deshmukh, Dipika Bhamre, Bansod, | 2015Vol.02 1 (4):391-395 | 0971-765X 4.89 |

| | | | | | |
|----------------|---|--|--|-----------------------------|-------------------------|
| | | And Conservation | Mavale | | |
| 4. | Estimation of Surface Runoff using SWAT Model | International Journal Inventive Engg. and Sci. (IJIES) | Malunjkar, V. S., M. G. Shinde, S. S. Ghotekar and A. A. Atre | 2015 | -- |
| 5. | Assessment of Runoff and Sediment Yield from a Small Agricultural Watershed | International Journal Inventive Engg. and Sci. (IJIES) | Malunjkar, V. S., M. G. Shinde, A. A. Atre and V.N. Barai | March 2015 | -- |
| 6. | Probability distribution functions for unit hydrographs with optimization using genetic algorithm | Applied Water Sciences | Ghorbani, M. A., V. P. Singh, B. Sivakumar, M. H. Kashani, A. A. Atre and H. Asadi | 2015 | -- |
| 7. | Isolines of location specific constants of rainfall intensity-duration-frequency for Vidarbha region | Advance Research journal of Crop Improvement | D.D.kothawale, G.U.Satpute and V.N.Barai | Dec. 2014, 5(2):84-88 | 3.86 |
| 8. | Evaluation of geomorphological parameters of selected watershed from Tapi basin using GIS. | BIOINFOLET-A Quarterly Journal of Life Sciences. | Nikam S.P., Purohit R.C., Sinde M.G.,Gavit B.K,Singh P.K | 2014 | 3.75 |
| 9. | Geo-Informatics in e-Governance and Crop Insurance Schemes: Monitoring and Assessment of Storm Affected Areas Using Weather Satellite Data. | Journal Of Agricultural, Biological And Environmental Sciences | Apturkar S.M, Gavit B.K and Sinha A.K. | 2014 | -- |
| 10. | Development of spectral signature curve for the suspended sediment using spectro-radiometer. | Engineering And Technology In India | S.S. Raut and B.K. Gavit | 2015 | 3.24 |
| 11. | Development of soil line and vegetative indices using spectroradiometer. | International Journal of Agril.Engg. | S.S. Raut and B.K. Gavit | 2015 | 4.43 |
| 2015-16 | | | | | |
| 1. | Determination Of Geomorphological Chara. of Dahikute Watershed Using Drainage Network Derived From GIS Tech. | International Journal Of Tropical Agriculture | Dipika Bhamare, Rajanee Salunkhe Deepika Mavale Bansod | 2 0 1 5 Vol 33(4) 3119-3125 | (0254-8755) 3.49 |
| 2. | Environmental flow: | International | V.K.Balsane, | 2015 Vol | Impac |

| | | | | | |
|----------------|--|---|--|--|-------------------------------|
| | Water Quality Assessment of a mula river | Jr. Of Enhanced Research in Science Tech. & Engg. | R.D.Bansod, A.A.Atre | 4(6):44-49 | t factor 4.059 |
| 3. | Assessment of water quality index on the downstream of Mula River | Ecology Environment and Conservation. | V.K.Balsane and R.D. Bansod | 2016 Vol. 22 (Agril. Suppl.): S399-S403 | (ISSN 0971-765X) 4.89 |
| 4. | Assessment of water quality index and suitability of Mula reservoir waterbody | Journal of Ecology, Envir. and Conservation | V.K. Balsane and R.D. Bansod | 2016 Suppl. Vol : 22 nd April (S357-S361) | (ISSN 0971-765X) 4.89 |
| 5. | Effect of land slope and rainfall intensity on splash erosion under simulated rainfall condition | Intl. Jr of Tropical Agri. (IJTA) | Barai, V.N., B.K. Kare and A.A. Atre | June, 2016 | 3.49 |
| 2016-17 | | | | | |
| 1. | A critical look into curve number method | Journal of Agric. Res. And Tech. | Atre A.A., V.A. Sthool and S.R. Barhate | 41(3): 343-361 | 0378-2395 (4.18) |
| 2. | Estimation of sediment yield using Remote Sensing (RS) and GIS technique | International Journal of Tropical agriculture | R.D.Bansod, S.A.Lad.,Balsane and S.P.Nikam | 0254-8755 3.49 | (0254-8755) 3.49 |
| 3. | Remote Sensing and GIS Technique with Gardes Equation for estimation of sediment yield | International Journal of Tropical agriculture | R.D.Bansod, S.A.Lad, and S.P.Nikam | 2016 Vol. 34 No.6 1829-1833 | (0254-8755) 3.49 |
| 4. | Evaluation of <i>hydrologic</i> criteria of Environmental Flow | International Journal of Tropical agriculture | V.K. Balsane and R.D.Bansod | 2016 Vol. 34 No.6 1821-1827 | 0254-8755 3.49 |
| 5. | Evaluation of hydraulic criteria of Environmental Flow | International Journal of Tropical agriculture | V.K. Balsane and R.D.Bansod | 2016 Vol. 34 No.6 1815-1820 | (0254-8755) 3.49 |
| 6. | Preparation of soil map of Gangapur sub catchment using laboratory test, RS and GIS Technology. | Progressive Research – An International Journal | A.A. Patwardhan and R.D. Bansod | 2016 Volume 11 (Special-VII) , 4564-4566 | (ISSN :0973-6417) 3.84 |
| 7. | Bacteriological Quality Of Mula River Down Stream Of Dam | Progressive Research – An International Journal | V.K. Balsane and R.D. Bansod | 2016 Volume 11 Special-VII) 4780-4783 | (ISSN :0973-6417) 3.84 |
| 8. | Study of changes in land | Progressive | Ravindra Bansod | 2016 | (ISSN |

| | | | | | |
|----------------|---|--|--|-------------------------------------|-------------------------------|
| | use and land cover using RS and GIS for MPKV Central campus | Research – An International Journal | and Amol Belhekar | Vol.11 (Sp.-VII) 4995-4999 | :0973-6417) 3.84 |
| 9. | Soil And Water Conservation Planning For MPKV Central Campus (West) using RS and GIS | Progressive Research – An International Journal | R.D. Bansod and N.R. Kanawade | 2016 Volume 11 (Sp.-VII) 5118 -5124 | (ISSN :0973-6417) 3.84 |
| 10. | Evaluation of water harvesting structure in respect of design dimensions and stability analysis | Intl. J. Tropical Agri. (IJTA) | Barai, V.N., G.G. Gadhari and A.A. Atre | 2017 | 3.49 |
| 11. | Establishment of Soil Erodibility Factor “K” for Soybean crop at Rahuri(M.S) | J. Agric. Res. Technol., | V. N. Barai, D. P. Mavale and D. Y. Khatal | 2016 41(3) : 487-491 (2016) | 4.18 |
| 12. | Grouping of Geomorphic Parameters in Selected Watershed using Principal Component Analysis for hydrological modelling | International Research Journal of Environment Sciences | B.K. Gavit, R.C. Purohit, P.K. Singh, M. Kothari and Jain H.,K | 2016 | -- |
| 13. | Evaluation of SWAT and WEPP models for Assessing Soil conservation interventions in small watershed. | J. Agric. Res. Technol., | Malunjkar V., Shinde M, Atre A, Gorantiwar S. and Bansod R. | 2017 42(3):048-058 | 4.18 |
| 2017-18 | | | | | |
| 1. | Identical linear reservoir model of geomorphologic instantaneous unit hydrograph: A review | Indian Journal of Soil Conservation | Atre, A.A., D.V. Pandit and M.G. Shinde | 2017 | 5.20 |
| 2. | Development of rainfall intensity nomograph for Kolhapur station (MS) | Journal of Soil & Water Conservation | V. N. Barai, and R. K. Kshirsagar | Oct-Dec. 2017.16 (4):365-369 | 5.08 |
| 3. | Urban Organic Solid Wastes as Farmland Manure and Fertilizers: A Review | International Journal of Current Microbiology and Applied Sciences | P.M. Ingle, H.N. Bhange, B.K. Gavit and R.C. Purohit | 2017 | 5.38 |
| 4. | Urban Solid Waste Management for Sustainability: A Case Study | International Journal of Current Microbiology and Applied Sciences | H.N. Bhange, P.M. Ingle, B.K. Gavit and P.K. Singh | 2017 | 5.38 |
| 5. | Energy Production through Co-fermentation | International Journal of | B.K. Gavit, H.N. Bhange, P.M. Ingle | 2017 | 5.38 |

| | | | | | |
|-----|---|---|---|--------------------------------|-------------|
| | of Organic Waste and Septage in Nashik City, India | Current Microbiology and Applied Sciences | and R.C. Purohit | | |
| 6. | Hydrological Modelling using SWAT | Research Journal of Recent Sciences | B.K. Gavit, R.C. Purohit, H.N. Bhangre and P.M. Ingle | 2017 | -- |
| 7. | Rainfall Simulation | Contemporary Research in India | R.D. Bansod, V.N.Barai, Punam Bhavsar, Dimple and Sonawane Vishakha | Jan. 2018. Special Issue | 3.23 |
| 8. | Development of Rainfall Intensity-Duration-Return period equation for Aurangabad station, Maharashtra, (India) | Contemporary Research in India | Mavale D.P., Pendke M.S. and Barai V.N | Jan. 2018. Special Issue | 3.23 |
| 9. | Rainfall runoff modeling using SWAT model for middle Godavari sub basin | Contemporary Research in India | Gavit B.K. Purohit R.C. Bansod R.D., Atre A.A. and Barai V. N | Jan. 2018. Special Issue | 3.23 |
| 10. | Interrelational of geomorphological properties of MPKV central campus (West) watershed derived from RS and GIS techniques | Journal of Agric. Res. technology | R.D. Bansod V.N. Barai and K.V. Bhalerao | 2017.42(3): 029-035 | 4.18 |
| 11. | Application of Geomorphological IUH models for small watersheds | International Journal of Earth Sciences and Engg. | D.V. Pandit, A. A. Atre, M.G. Shinde, V.P. Patil and S.M. Kareppa | 10(5) 1048-1055 2017 | 0974-5904 |
| 12. | Determination of geomorphological characteristics of Karpikalu watershed using GIS techniques. | Journal of Pharmacognosy and Phytochemistry | R.D. Bansod and G.S. Ajbe | 2018 7(1): 1940-1944 | 5.21 |
| 13. | Evaluation of Morna river catchment with RS & GIS technique | Journal of Pharmacognosy and Phytochemistry | R.D. Bansod and U.M. Dandekar | 2018 7(1): 1945-1948 | 5.21 |
| 14. | Rainfall intensity on Directional Splash erosion in clay loam soil under simulated condition. | International Journal of Bio-resource and stress management | Barai V.N, Satpute G.U and Atre A.A. | 2018 9(1):013-016 | 4.65 |
| 15. | Evaluation of watershed with remote sensing and GIS techniques for land use | Shodhankan special issue | Bansod R.D and Belhekar Amol | 2018 ; 64-71 | -- |

| | | | | | |
|-----|---|-------------------------------------|---|------------------------------|----------------|
| 16. | Effect of microsprinkler overlapping and surface irrigation on Cauliflower | Contemporary Research in India | Bansod R.D. | 2018: special issue: 73:78 | 3.23 |
| 17. | Simulation of runoff and sediment yield from a small watershed using WEEP model | Contemporary Research in India | Malunekar v.A, Shinde M.G., Bansod R.D. Atre A.A. and Gorantiwar S.D. | 2018: special issue: 327:333 | 3.23 |
| 18. | Mastering towards the teaching excellence | A peer reviewed national journal | Bansod R.D. | 2018 | ISSN 2231-0096 |
| 19. | Study useful and Pathogenic microbes available in Mula river downstream of dam | Shodhankan special issue | Bansod R.D and Balsane V.K | 2018-32-37 | -- |
| 20. | Hydrological Modelling using SWAT | Research Journal of Recent Sciences | B.K. Gavit, R.C. Purohit, H.N. Bhangre and P.M. Ingle | 2017 | -- |

Trainings attended by Faculties of SWCE deptt.

Period 2013-14 to 2017-18

| Sr. No. | Title of training | Place of training | Duration of training | Name of faculty |
|----------------|--|--------------------------------------|--|-----------------|
| 2013-14 | | | | |
| 1. | Applications of Remote Sensing and GIS in Natural Resources Management | NBSS&LUP, Regional Centre, Bangalore | 4/7/2013 to 24/7/2013 | Dr. B.K. Gavit |
| 2. | MATLAB Applications for Soft Computing & Simulation in Agriculture | MPKV, Rahuri | 3/2/2014 to 11/2/2014 (2 weeks) | Dr. R.D. Bansod |
| 3. | MATLAB Applications for Soft Computing & Simulation in Agriculture | MPKV, Rahuri | 3/2/2014 to 11/2/2014 (2 weeks) | Dr. A. A. Atre |
| 4. | MATLAB Applications for Soft Computing & Simulation in Agriculture | MPKV, Rahuri | 3/2/2014 to 11/2/2014 (2 weeks) | Dr. V.N. Barai |
| 5. | MATLAB Applications for Soft Computing & Simulation in Agriculture | MPKV, Rahuri | 3/2/2014 to 11/2/2014 (2 weeks) | Dr. B. K. Gavit |
| 6. | One day training on Interactive session for newly elected chairman & Honorary secretaries of IEI state & Local centre's | IEL (India) Ahmednagar Centre | 8/02/2014 | Dr. A.A. Atre |
| 2014-15 | | | | |
| 1. | 14th IIRS Outreach Programme on "Applications of Remote Sensing and Geographical Information System For Natural Resources" | CTAE Udaipur | Jan. 27/01/2015 to 27/03/2015 | Dr. B. K. Gavit |
| 2. | Workshop on Impact Analysis for Agril-Technologies in Research, Education and Extension | MPKV, Rahuri | 6/2/2015 (1 Day) | Dr. V.N. Barai |
| 3. | National Workshop on "Protected Cultivation for Vegetable Crops" | MPKV, Rahuri | 10/3/2015 to 11/3/2015 (2 Days) | Dr. V.N. Barai |
| 4. | State Level Workshop on "ICT Based Applications in Irrigation Scheduling" | MPKV, Rahuri | 24/3/2015 (1 Day) | Dr. V.N. Barai |
| 5. | Training on National Information system on Agricultural Education Network (NISAGENET) | MPKV Rahuri | 31/03/2015 | Dr. A.A. Atre |
| 2015-16 | | | | |
| 1. | 15th IIRS Outreach Programme on "Basics of Remote Sensing ,GIS & GNSS " | CTAE Udaipur | 10/08/2015 to 27/11/2015 | Dr. B. K. Gavit |
| 2. | Regional workshop on Time and Stress management for better performance of extension personnel. | MPKV, Rahuri | 28/9/2015 to 30/9/2015 (3 days) | Dr. V. N. Barai |
| 3. | 16 th IIRS Outreach Programme on | CTAE Udaipur | 11/02/2016 | Dr.B.K. |

| | | | | |
|----------------|---|---|--|------------------|
| | "Geospatial Technologies for Urban Planning" | | to 15/03/2016 | Gavit |
| 4. | One day training programme on RTI ACT 2005 | MPKV, Rahuri | 30/03/2016 | Dr. A.A. Atre |
| 2016-17 | | | | |
| 1. | Training/ Workshop on Leadership Development and Team Building skills for Extension Functionary. | MPKV, Rahuri [Conducted by Extension Education Institute(Western region) Anand Agricultural University Campus, Anand | 1/3/2017 to 3/3/2017 (3 days) | Dr. V.N. Barai |
| 2. | Training programme on "Personality Development Program" | MPKV, Rahuri (MIDAS Academy for Excellence Pvt. Ltd., Pune) | 18/3/2017 to 18/3/2017 (One day) | Dr. R. D. Bansod |
| 3. | Training programme on "Personality Development Program" | MPKV, Rahuri (MIDAS Academy for Excellence Pvt. Ltd., Pune) | 18/3/2017 to 18/3/2017 (One day) | Dr.A.A. Atre |
| 4. | Training programme on "Personality Development Program" | MPKV, Rahuri (MIDAS Academy for Excellence Pvt. Ltd., Pune) | 18/3/2017 to 18/3/2017 (One day) | Dr. V. N. Barai |
| 5. | Training programme on "Personality Development Program" | MPKV, Rahuri (MIDAS Academy for Excellence Pvt. Ltd., Pune) | 18/3/2017 to 18/3/2017 (One day) | Dr. B. K. Gavit |
| 6. | one week Faculty Development Programme on "Applications of Advanced Computational & Measurement Techniques in Research" | CTAE, MPUAT Udaipur | 17/10/2016 to 22/10/2016 | Dr. B .K. Gavit |
| 7. | one week "Skill Up Graduation Programme on Agro-food and Dairy Technology" | CDFST, MPUAT, Udaipur | 6/02/2017 to 10/02/2017 | Dr.B.K. Gavit |
| 2017-18 | | | | |
| 1. | The Training Program on TerrSet, WMS 10.1, Surfer 14 & Grapher 12 Software | Dr.ASCAE&T Rahuri | 17/7/2017 to 22/7/2017 (Six day) | Dr. R.D. Bansod |
| 2. | The Training Program on TerrSet, WMS 10.1, Surfer 14 & Grapher 12 Software | Dr.ASCAE&T Rahuri | 17/7/2017 to 22/7/2017 (Six day) | Dr. A. A. Atre |
| 3. | The Training Program on TerrSet, WMS 10.1, Surfer 14 & Grapher 12 Software | Dr.ASCAE&T Rahuri | 17/7/2017 to 22/7/2017 (Six day) | Dr. V.N. Barai |
| 4. | The Training Program on TerrSet, WMS 10.1, Surfer 14 & Grapher 12 Software | Dr.ASCAE&T Rahuri | 17/7/2017 to 22/7/2017 (Six day) | Dr. B. K. Gavit |
| 5. | Training Programme under Pro-SOIL Project for Content Manager and Content Creators | National Institute of Agricultural Extension Management, Hyderabad | 30/10/2017 to 31/10/2017 (Two day) | Dr. R.D. Bansod |
| 6. | Training Programme under Pro-SOIL Project for Content Manager and Content Creators | National Institute of Agricultural Extension Management, Hyderabad | 30/10/2017 to 31/10/2017 (Two day) | Dr. V.N. Barai |

Details of Seminar/Conference/Workshop attended

Period 2013-14 to 2017-18.

| Sr. No. | Title of seminar | Place of seminar | Duration | Name of the faculty |
|----------------|---|--|--------------------------------|---------------------|
| 2013-14 | | | | |
| 1. | Workshop on Mouth Organ for Health and Stress Management | A.C. Pune | June 8-9, 2013 | Dr. R.D. Bansod |
| 2. | National Seminar on AgriBizz -2014 | Pune | Dec 15-16, 2014 | Dr. R.D. Bansod |
| 3. | All India Seminar on Recent Advances in Watershed Development Programme (AISRAWDEP) | The IEI (India) Ahmednagar Local Centre, Ahmednagar | 5-6 Sept.2013 | Dr. A.A. Atre |
| 4. | All India Seminar on Recent Advances in Watershed Development Programme (AISRAWDEP) | The IEI (India) Ahmednagar Local Centre, Ahmednagar | 5-6 Sept.2013 | Dr. V.N. Barai |
| 5. | All India Seminar on Recent Advances in Watershed Development Programme (AISRAWDEP) | The IEI (India) Ahmednagar Local Centre, Ahmednagar | 5-6 Sept.2013 | Dr. B.K. Gavit |
| 6. | All India Seminar on 'Engineering Technologies for Sustainable Agriculture through Natural Resource Management' | MPUAT Udaipur | Feb 21-23, 2014 | Dr. V.N. Barai |
| 7. | All India Seminar on 'Engineering Technologies for Sustainable Agriculture through Natural Resource Management' | MPUAT Udaipur | Feb 21-23, 2014 | Dr. B.K. Gavit |
| 2014-15 | | | | |
| 1. | Awareness workshop on Issues related to GM crops | Pune | 17 th January, 2017 | Dr. R.D. Bansod |
| 2. | National Workshop on Protected cultivation for Vegetable crops | MPKV Rahuri | March 10-11, 2015 | Dr. R.D. Bansod |
| 3. | National Seminar on Technology and Management of Microirrigation in Floriculture | Sher-E-Kashmir University of Agril. Sciences and Tech. of Jammu | March 19-20, 2015 | Dr. R.D. Bansod |
| 4. | Impact Analysis for Agril. Technologies in Research Education and Extension | MPKV Rahuri | Feb 2015 | Dr. R.D. Bansod |
| 5. | State Level Workshop on ICT based applications in Irrigation scheduling | MPKV Rahuri | 24 th March 2015 | Dr. R.D. Bansod |
| 6. | National Seminar on Global opportunities in Agril. Entrepreneurship/Business (GOAEB). | Pune, | Dec. 15-16,2014 | Dr. R. D. Bansod |
| 7. | National Seminar on Global opportunities in Agril. Entrepreneurship/Business (GOAEB). | Pune, | Dec. 15-16,2014 | Dr. V.N. Barai |
| 8. | 4 th International Conference on Hydrology and Watershed Management Centre for Water Resources. | Institute of Science & Technology and JNTU, Hyderabad, Telangana State | 29 Oct-to 1, Nov, 2014 | Dr. V.N. Barai |
| 9. | One day Workshop on Impact Analysis for Agril. Technologies in Research, Education and Extension | MPKV, Rahuri | 6 Feb. 2015 | Dr. A.A. Atre |
| 10. | Workshop on Impact analysis for Agril-Technologies in Research, Education and | MPKV, Rahuri, | 6 Feb 2015 | Dr. V.N. Barai |

| | | | | |
|----------------|---|---|-----------------------|------------------|
| | Extension. | | | |
| 11. | National Workshop on Protected Cultivation for Vegetable Crops | MPKV, Rahuri, | 10-11 March 2015 | Dr. V.N. Barai |
| 12. | National seminar on Technology and Management of micro-irrigation in floriculture | SKUAST-Jammu, | March 19-20, 2015 | Dr. R. D. Bansod |
| 13. | National seminar on Technology and Management of micro-irrigation in floriculture | SKUAST-Jammu, | March 19-20, 2015 | Dr. A A. Atre |
| 14. | State Level Workshop on "ICT Based Applications in Irrigation Scheduling" | MPKV, Rahuri | 24/3/2015 | Dr. V.N. Barai |
| 2015-16 | | | | |
| 1. | All India Seminar on Engineering Technologies for Sustainable Agriculture through Natural Resource management. | IEI (India) Ahmednagar Local Centre, Ahmednagar, | Sept.2015 | Dr. V.N. Barai |
| 2. | Participated and presented paper in 25 th National Conference on Natural Resource Management in Arid and Semi Arid Ecosystem for Climate Resilient Agriculture and Rural Development | Soil Conservation Society of India, New Delhi at SKAU, Bikaner | 17-19 February, 2016 | Dr. B K. Gavit |
| 3. | Participated in National Seminar on Research Innovations, Copy right and Patents | Pad. Vitthalrao Vikhe Patil College of Engg. Ahmednagar | 3 March 2016 | Dr. A.A. Atre |
| 4. | IJTA 3 rd International Conference on Agriculture, Horticulture & Plant Sciences, International Journal of Tropical Agriculture. | New Delhi | June, 2016. | Dr. V.N. Barai |
| 2016-17 | | | | |
| 1. | All India Seminar on "Technological Interventions for Enhancing Agricultural productivity". | IEI(India) Ahmed Nagar Local Centre, Ahmed Nagar | August 26-27, 2016 | Dr. V.N. Barai |
| 2. | a State level Conference on "Future Challenges and Opportunities in Indian Agriculture" | Dr. Ulhas Patil college of Agricultural Engineering & Technology, Jalgaon | 16-17 September 2016. | Dr. B.K. Gavit |
| 3. | All India Seminar on "Sustainable Developments in Indian Engineering Sector in Next Decade" | Institution of Engineers (India) Pune Local Centre | 15-16, October, 2016. | Dr. B.K. Gavit |
| 4. | 3 rd International Conference on Environmental Friendly Agriculture, Horticulture in Planning a Smart city | Janparishad and Sus Tran Con(SSA), Bhopal (M.P) | 12-14, December 2015 | Dr. V.N. Barai |
| 5. | All India on Mechanical Composting of Municipal Solid Waste for Using it as Farmland Fertilizer" | Institution of Engineers (India) Udaipur Local Centre | December 23-24, 2016. | Dr. B. K. Gavit |
| 6. | International Conference on Emerging technologies in Agril. and Food Engg. | IIT Kharagpur | Dec 27-30, 2016 | Dr. R.D. Bansod |
| 7. | International Conference on Emerging Technologies in Agricultural & Food Engineering. | IIT, Kharagpur | 27-30 Dec.2016 | Dr. V.N. Barai |
| 8. | International Conference on Eco Fiendly and Socially Responsive Economy and Equity: Issues and Challenge of 21 st | Mohanlal Sukhadia University Udaipur (Rajasthan) | 9-11 January, 2017. | Dr. B. K. Gavit |

| | | | | |
|----------------|--|---|---------------------|-----------------|
| | Century for Emergent Sustainable Development Amongst SAARC Countries. | | | |
| 9. | one day Workshop on "Phule Jal and Phule Irrigation Scheduler" Mobile Apps for Irrigation scheduling | MPKV, Rahuri | January 16, 2017. | Dr. B. K. Gavit |
| 10. | International Conference on Tech. advances in climate –smart Agril. and sustainability | SRTM Nanded | January 16-18, 2017 | Dr. R.D. Bansod |
| 11. | International Conference on TACSAS-2017, Technological Advances in Climate Smart Agriculture and Sustainability, | SGGS Institute of Engineering and Technology, Nanded | 16-18 January 2017 | Dr. V.N. Barai |
| 12. | State level workshop on ‘On farm water conservation’ | Ch. Shivaji Maharaj College of Engg., Ahmednagar | Feb 14-15, 2017 | Dr. R.D. Bansod |
| 13. | Leadership development and Team Building Skills for Extension Functionary | MPKV Rahuri (Conducted by Govt of India, Ministry of Agril., Extension Education Institute, AAU, Anand) | March 1-3, 2017 | Dr. R.D. Bansod |
| 14. | National Level Seminar on Research, Innovations, copy right and Patents | Pad. Dr. V. V. Patil College of Engineering, Vadgaon Gupta, Ahmednagar | 3/3/2016. | Dr. V.N. Barai |
| 15. | National Conference on "Advanced Trends in Agricultural Food Engineering (ATAFF 2017) Organized at MIT Aurangabad. | Deptt. of Agril Engg in Association with MIT College of Food Engg. Aurangabad | 7-8, April 2017. | Dr. B. K. Gavit |
| 2017-18 | | | | |
| 1. | 3 rd International Conference on Bioresource & Stress Management. | SIAM, Jaipur | 8-11 Nov., 2017 | Dr. V.N. Barai |
| 2. | International Seminar on Global Climate Change Implications. | WALMI, Aurangabad | Dec 14-16, 2017 | Dr. R.D. Bansod |
| 3. | National Seminar on “Recent trends in Plant and Agricultural Research” | Solapur | January 11-12, 2018 | Dr. R.D. Bansod |
| 4. | National Seminar on “Recent trends in Plant and Agricultural Research” | Solapur | January 11-12, 2018 | Dr. B.K. Gavit |

Awards Received

Period 2013-14 to 2017-18

| Sr. No. | Name of the faculty | Organization providing award | Level (regional/State/National/International) | Event during when award received | Date of receipt of award |
|----------------|---------------------|---|--|---|--------------------------|
| 2013-14 | | | | | |
| 1. | Dr. R.D. Bansod | Senior National Chess Arbiter- All India Chess Federation | National Level | | |
| 2. | Dr. R.D. Bansod | State Level DIPEX Competition, Pune | State Level | Judge | |
| 3. | Dr. R.D. Bansod | Senior National Chess Arbiter Exam (National Exam) conducted by International (FIDE) Arbiter | National | Senior National Chess Arbiter | Jan 21, 2014 |
| 4. | Dr. V.N. Barai | The Institution of Engineers (I), Ahmednagar Local Centre | “Outstanding Engineer Award” in recognition of outstanding performance and excellent work in engineering field | ‘46 th Engineers’ Day on 16/9/2013 at Ahmednagar | Sept, 16, 2013 |
| 2014-15 | | | | | |
| 1. | Dr. R. D. Bansod | Institution of Engineers India (Fellow) | National | Received by post | Jan 20, 2015 |
| 2. | Dr. R. D. Bansod | Bronze Medal in 100 M Run-Masters Athletics Association Govt. of Maharashtra | State | 36 th Maharashtra State Masters Athletics Championship | March 1, 2015 |
| 3. | Dr. R. D. Bansod | Agrocare Idol (State Level Agrocare Best Teacher) -Agrocare Krishi Manch, Maharashtra Krishi Vistar Pvt.Ltd. and Maharashtra State Agril Dept. | State | Kasmade Krishi Mahotsav, Satana, Nasik | March 2015 |
| 4. | Dr. R. D. Bansod | Read lead paper in National seminar on Technology and Management in floriculture at SKUAST Jammu | National | | March 19-20, 2015. |
| 5. | Dr.A.A. Atre | Read lead paper in National seminar on Technology and Management in | National | | March 19-20, 2015. |

| | | | | | |
|----------------|---------------------|---|------------------------|---|------|
| | | floriculture at SKUAST Jammu | | | |
| 6. | Dr. R. D. Bansod | State Level Best Teacher (Agrocare Idol) Govt of Maharashtra (Agril. Dept, Nashik), Agrocare Krishimanach and Agril. Extn, Maharashtra | State Level | | |
| 7. | Dr. R. D. Bansod | Bronze medal in 100 M Running | State Level | 36 th Open Maharashtra Masters Athletics | |
| 2015-16 | | | | | |
| 1. | Dr. R. D. Bansod | Nagvidarbha Ratna- Nagvidarbha Organization, Pune | State | General Meeting and Yearly Function | 2015 |
| 2. | Dr. R. D. Bansod | Best Paper Award- International Conference (ICRAAHS-2016), held in Jodhpur | International Level | | 2016 |
| 3. | Dr. R. D. Bansod | Bronze medal in 100 M Running in 38th Open Maharashtra Masters Athletics- Masters Athletics Association Govt. of Maharashtra | State Level | | 2016 |
| 4. | Dr. R. D. Bansod | Bronze medal in 200 M Running in 38th Open Maharashtra Masters Athletics | State Level | | 2016 |
| 5. | Dr. R. D. Bansod | Bronze medal in 400M Running in 38th Open Maharashtra Masters Athletics - Masters Athletics Association Govt. of Maharashtra | State Level | | 2016 |
| 6. | Dr. R. D. Bansod | Distinguished Scientist Award- Astha Foundation (UP), awarded in National Seminar (ICAAAS- 2016), Hyderabad | National Level | | 2016 |
| 7. | Dr. R. D. Bansod | Outstanding Scientist- International Conference (ICRAAHS-2016), | International Level | | 2016 |

| | | | | | |
|----------------|------------------|--|---|---|-------------------|
| | | held in Jodhpur | | | |
| 8. | Dr. R. D. Bansod | Excellence in Teaching- Society for Scientific Development in Agril. and Technology, awarded in National Seminar (ICAAAS-2016), hyderabad | National Level | | 2016 |
| 9. | Dr. B.K. Gavit | Best paper- Institution of Engineers (India)Udaipur Local Centre | National | All India seminar on Mechanical Composting of Municipal Solid Waste For Using it as Farmland Fertilizer | Dec. 23-24, 2016. |
| 10. | Dr. R. D. Bansod | Runnership in Open Chess Tournament - 2017 (Prerana Chess Academy and Bapu Kate foundation) | Regional (Pune) | Pimple Saudagar-Rahatani Pune Open Chess Tournament-2017 | April, 16, 2017 |
| 2016-17 | | | | | |
| 1. | Dr. V.N. Barai | International Journal of Tropical Agriculture and Serials Publications Pvt. Ltd., New Delhi | “Outstanding Scientist Award 2016” Trophy and Certificate | IJTA 3 rd Int. Conference on Agriculture, Horticulture & Plant Sciences on June 25- 26, 2016 at New Delhi. | June 25-26, 2016 |
| 2. | Dr. V.N. Barai | IJTA 3 rd International Conference on Agriculture, Horticulture & Plant Sciences | Received “Best Paper Presentation Award” | IJTA 3 rd Int. Conference on Agriculture, Horticulture & Plant Sciences on June 25- 26, 2016 at New Delhi | June 25-26, 2016 |
| 3. | Dr. R. D. Bansod | Bronze Medal in 100 M- Masters Athletics Association Govt. of Maharashtra | State | Masters Athletics Association Govt. of Maharashtra | Dec. 10, 2016 |
| 4. | Dr. R. D. Bansod | Bronze Medal in 200M - Masters Athletics Association Govt. of Maharashtra. | State | Masters Athletics Association Govt. of Maharashtra | Dec. 10, 2016 |
| 5. | Dr. R. D. Bansod | Bronze Medal in 400M Masters Athletics Association Govt. of Maharashtra | State | Masters athletics Association Govt. of Maharashtra | Dec. 10, 2016 |
| 6. | Dr. R. D. Bansod | National Conference on Innovative and Current Advances in Agril and | National | National Conference ICAAS-2016, Hyderabad | Dec. 11, 2016 |

| | | | | | |
|----------------|------------------|--|----------------|---|---------------------|
| | | allied sciences (ICAAAS-2016), Society for Scientific Dev. in Agril. and Technology | | (SSDAT) | |
| 7. | Dr. R. D. Bansod | Distinguished Scientist - National Conference ICAAS-2016, Hyderabad (Astha Foundation Meerut, UP) | National | National Conference ICAAS-2016, Hyderabad (SSDAT) | 11-12-2016 |
| 8. | Dr. R. D. Bansod | Outstanding Scientist -(Int. Conference) Int. Journal of Tropical Agriculture and Serial Publ., New Delhi | International | International Conference on Recent advances in Agril. and Hort. Sciences | 31-12-2016 |
| 9. | Dr. R. D. Bansod | Best Research Paper - (Int. Conference) International Journal of Tropical Agriculture and Serial Publ., New Delhi | International | International Conference on Recent advances in Agril. and Hort. Sciences | 31-12-2016 |
| 2017-18 | | | | | |
| 1. | Dr. R. D. Bansod | Krishi Prerana Purshkar- Agrocare Krishimanch and Agril. Department, GoM | State | Farmers Exhibition, Pimpalgao Basawant Nashik | July 2017 |
| 2. | Dr. R. D. Bansod | Loksatta Sangharsha Krishiratna Adarsha Shikshak Purshar-2017-Loksatta Sangharsha News 24 hours, Ahmednagar | State | Prize Distribution Function in Mauli Hall Ahmednagar | 17/09/2017 |
| 3. | Dr. R. D. Bansod | “Best Paper Presentation Award” | International- | 3 rd International Conference on Bioresource & Stress management at Jaipur | November 8-11, 2017 |
| 4. | Dr. R. D. Bansod | Silver Medal in 400 M -Maharashtra Masters Inter-District Competition (Masters Athletics Association Govt. of Maharashtra) | State | 39 th Maharashtra Masters Interdistrict Athletic Championship-2017, Wahim | 2/12/2017 |
| 5. | Dr. R. D. Bansod | Dr. APJ Abdul Kalam life time achievement national award | National | Bengaluru | June 2, 2018 |

Details of recognition/honors

Period 2013-14 to 2017-18

Key note speech/lead speaker/Chairman Co-chairman of the Technical lesson

| Sr. No. | Name of the faculty | Name of the event during which recognition/honors were given | Date | Type of recognition (Key note speech/lead speaker/ Chairman Co-chairman of the Technical lesson) |
|----------------|---------------------|--|---------------------|---|
| 2013-14 | | | | |
| 1. | Dr. A. A. Atre | Training programme on micro irrigation technology | June 4-5, 2014 | Delivered lecture |
| 2. | Dr. A. A. Atre | Training programme on micro irrigation technology | October 9-10, 2013 | Delivered lecture |
| 3. | Dr. R. D. Bansod | State Level DIPEX Competition, Pune | | Judge |
| 4. | Dr. A. A. Atre | 46 th Engineers Day | 16/09/2013 | Special appreciation award |
| 5. | Dr. A. A. Atre | Training programme on micro irrigation for efficient use of water management | May 7-8, 2013 | Delivered lecture |
| 6. | Dr. A. A. Atre | Training programme on micro irrigation for efficient use of water management | May 9-10, 2013 | Delivered lecture |
| 2014-15 | | | | |
| 1. | Dr. A. A. Atre | Training programme on micro irrigation technology | July 1-2, 2014 | Delivered lecture |
| 2. | Dr. R. D. Bansod | Senior National Chess Arbiter Exam (National Exam) conducted by International (FIDE) Arbiter | 12/01/2015 | Senior National Chess Arbiter |
| 3. | Dr. A. A. Atre | National seminar on "Technology and Management of Micro Irrigation in Floriculture" | March 19-20, 2015 | Lead paper |
| 4. | Dr. R. D. Bansod | National Seminar on Technology and Management of Microirrigation in Floriculture, Jammu | 20-03-2015 | Lead Speaker |
| 2015-16 | | | | |
| 1. | Dr. R. D. Bansod | International Conference on Tech. advances in climate –smart Agril. and sustainability | January 16-18, 2016 | Chairman for Technical Session |
| 2016-17 | | | | |
| 1. | Dr. A. A. Atre | All India Seminar on "Technological Interventions for Enhancing Agricultural productivity" | August 26-27, 2016 | Chairman of technical session " Land and Water Management Techniques" |

| | | | | |
|----------------|------------------|--|---------------------|---|
| 2. | Dr. R. D. Bansod | International Conference on Emerging technologies in Agril. and Food Engg. | Dec 27-30, 2016 | Co-Chairman for Technical Session |
| 3. | Dr. R. D. Bansod | International Conference on Tech. advances in climate –smart Agril. and sustainability | January 16-18, 2016 | Chairman for Technical Session |
| 2017-18 | | | | |
| 1. | Dr. R.D. Bansod | Kisan Adhar Sammelan 2017 | Sept 25-29, 2017 | Co-Chairman for Technical Committee and Co-ordinator for technical Session on Watershed Mangement |
| 2. | Dr. R. D. Bansod | International Conference on Emerging technologies in Agril. and Food Engg. | Dec 27-30, 2016 | Co-Chairman for Technical Session |
| 3. | Dr. A. A. Atre | Attended as Guest for Convocation of Raisoni college of Engineering, Chas | 2018 | Guest for convocation |

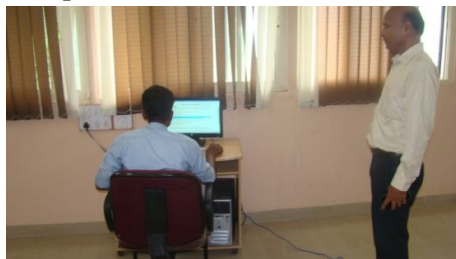
Extension Activities of SWCE Deptt.

Trainings Organized

1. Department of SWCE organized training Program on “TerrSet, WMS 10.1, Surfer 14 & Grapher 12 Software” during 17/7/2017 to 22/7/2017 for university teacher and PG students, sponsored by Aditi Infotech, Nagpur.



2. Department of SWCE organized 24-IIRS Outreach programme on “Remote Sensing and Digital Image Analysis” for fourth year B.Tech. (Agril. Engg.) Students Aug. 21 to Sept. 15, 2017.



3. Department of SWCE organized 23-IIRS Outreach programme on “Basics of Remote Sensing, GIS and Global Navigation Satellite System” for PG and Ph. D students during 21 Aug. 2017 to 1 Dec. 2017.

Important visits:

1. Dr. B. C. Mal, Professor AGFE, IIT, Kharagpur and Ex. Vice Chancellor, Chattisgadh Swami Vivevakanand Technical University, Bhillai visited as Adjunct Faculty for Soil and Water Conservation Engineering from August 9-5, 2014.
2. Shri. Popatraoji Pawar, Executive President, Adarsh Gaon Yojana, Maharashtra state on August 2nd, & Sept. 17th, 2016 visited for planning of Watershed development plan of Central Campus MPKV Rahuri.
3. Dr. A. A. Atre has been nominated as Adjunct Faculty for Shri. Chh. Shivaji Maharaj College of Engineering Nepti, Ahmednagar for Deptt. of Civil Engineering.
4. Dr. A. A. Atre was called as guest of honour and key note speaker for state level workshop at Shri. Chatrapati Shivaji College of Engineering, Nepti Ahmednagar on “On farm Conservation”.
5. Hon. Secretary Govt. of Maharashtra Shri. Venugopal Reddy, visited MPKV campus on 18/06/2017. Dr. R.D. Bansod presented the planning and development of MPKV central campus watershed with power point presentation.
6. Department of SWCE organized lecture of Dr. N.K. Gontia Dean, Junagarh Agriculture University, Junagarh for M. Tech. and Ph.D. students of SWCE and IDE department on Sept.11, 2017.
7. Inauguration of Planning and Development of MPKV Central Campus Watershed through Adarsha Gaon Yojana by Highness of Governor of Maharashtra State C. Vidyasagar Rao, Hon. Agril. Minister, Shri. Paduranji Phundkar, Guardian Minister Hon. Ram Shinde, & Hon. Popatraoji Pawar on 25/10/2017.



Major Events/activities

1. Dr. R. D. Bansod, Head SWCE, acted as Coordinator for Training on “MATLAB applications for soft computing & simulation in Agriculture” during February 3-11, 2014.
2. Dr. R.D. Bansod delivered Radio at AIR Pune talk on
 1. Utility of farm pond
 2. Soil & Water conservation Techniques
3. Dr. R.D. Bansod delivered Radio talk (Live Radio Interview) on AIR, Ahmednagar In January, 2016.
4. Dr. R.D. Bansod was appointed as Member by Govt. of Maharashtra for draft committee of “Jalyukt Shivar Abhiyan”
5. Dr. R. D. Bansod, Head (SWCE) acted as tour leader for third year B. Tech. (Agril. Engg.) students educational tour at Hivare Bazar and Ralegan Siddhi March 2017.
6. Dr. R. D. Bansod prepared a proposal for watershed planning and development of MPKV central campus watershed of 8,660 acres area, the proposal is approved 1.14 Crore and Adarsha Gaon Yojana, Maharashtra State.

Faculty contribution

Period 2013-14 to 2017-18

| Sr.No. | Contribution (books/laboratory development/ reorganization of training/ workshop/seminar/research recommendation) | Name of faculty |
|----------------|--|-----------------|
| 2014-15 | | |
| 1 | Book editor” sustainable Agriculture trough Natural Resource Management” published by Institution of Engineers (India) Ahmednagar Local centre. (IBN978-81-92607-2-5) | Dr. A.A. Atre |
| 2 | Book editor” sustainable Agriculture trough Natural Resource Management” published by Institution of Engineers (India) Ahmednagar Local centre. (IBN 978-81-92607-2-5) | Dr. V.N. Barai |
| 2015-16 | | |
| 1 | Book chapter “Need and methods of water conservation in Maharashtra” in Water Conservation of India Annual Technical Volume 2016. Institution of Engineers (India) Civil Engineering Division Board. Vol-II. | Dr. A. A. Atre |
| 2016-17 | | |
| 1 | Book chapter “Loss of soil and nutrient from complex slopes” Precision Farming and Resource Management (ISBN 978-93-86256-29-4) | Dr. A. A. Atre |
| | Book chapter “ Precision Farming and Resource Management” (ISBN 978-93-86256-29-4) | Dr. V. N. Barai |
| 2 | Book chapter “Modelling Synthetic Unit hydrograph for small watershed using Gamma distribution function” Proceedings of International conference TACSAS-2017. | Dr. A. A. Atre |

In-Plant training to the students of B. Tech. (Agril. Engg)

Name of the Department: Soil & Water Conservation Engineering.

Period: 2013-14 to 2017-18.

| Year | Name of the organization | No. of students trained |
|---|--|--------------------------------|
| 2013-14 | National Institute of Hydology, Roorkee | 2 |
| | Centre for Experiential Learning, Narangi | 4 |
| | HTC, Talegaon Dabhade, Pune | 5 |
| | Indian Institute of Remote Sensing Dehradun | 3 |
| 2014-15 | Rural Communes Centre for Experiential Learning At-Narangi village Tal-Khalpur Dist-Raigad | 1 |
| | WOTR-Shikrapur | 2 |
| | Watershed Development at Peth, Dist-Nasik | 2 |
| | DHI (India), Water and Environment Pvt. Ltd. Water and Environment, Pune | 1 |
| | National Institute of Post Harvest Technology's Horticultural Trunning Centre, Talegaon dabhade, Pune | 4 |
| | Lasern & Turbo, Ahmednagar | 1 |
| | BAIF Pune | 3 |
| | ICAR-Indian Institute of Soil and Water Conservation, Research Centre, Vasad- 388 306, Gujarat, India | 3 |
| | 2015-16 | Vanarai Foundation Trust, Pune |
| ICAR-Indian Institute of Soil and Water Conservation, Research Centre, Vasad- 388 306, Gujarat, India | | 5 |
| Tata Institute of Social Science, Mumbai | | 6 |
| 2016-17 | Govind Green House Pvt. Ltd. Talegaon Dabhade, Pune | 5 |
| | Regional Remote Sensing Service Centre, (Central) Nagpur | 3 |
| | Siddheshwar Krishi & Gramin Vikas Pratishthan, New Pargaon, Kolhapur | 2 |
| | Centre for Experiential Learning, Rural Communes, At. Narangi Village, Post. Donwat, off- Khopoli Pen Road, Tal. Khalapur Dist. Raigad | 3 |
| 2017-18 | Sidheshwar Krishi & Gramin Vikas Sanstha, New Pargaon, Tal. Hatkanagale Dist. Kolhapur | 5 |
| | Development Support Centre, 1 st Floor of Gaikwad Hospital, In-front of Awari Hospital, Nagar Road Highway Alephata, Tal Junar Dist. Pune Pin. 412411 | 5 |
| | ICAR-Indian Institute of Soil and Water Conservation, Research Centre, Vasad- 388 306, Gujarat, India | 4 |
| | Regional Remote Sensing Centre – Central, Post Box No.439 Shankar Nagar P.O. Amravati Road, Shankar Nagar, Nagpur-440010, Maharashtra | 1 |
| | Deshbandhu Manjugupta Foundation, S.N.52/2, Plot.No.42, Sadguru Colony, Near dolly house school, Deopur, Dhule, Maharashtra 424005 | 1 |

Student Research Project Completed

Name of the Department: Soil and Water Conservation Engineering

Period: 2013-14 to 2017-18

| Sr.No | Year | Title of the Research Project | Name of the Students | Name of the Guide | Year of Completion | Remark |
|-------|-----------------------------|---|--|-------------------|--------------------|--------|
| A | B.Tech (Agril.Engg.) | | | | | |
| | 2013-14 | Studies on Selected physical Characteristics of Rainfall Under Simulated Condition | A.S.Dhotre R.R.Manal | Prof.V.N. Barai | 2013 | |
| | | Studies on Spreading of Splashed Material Under Simulated Rainfall Condition | S.G.Patil A.M.Shelke P.T.Thange S.S.Madake | Prof. V. N. Barai | 2013 | |
| | | Application of Gamma Distribution Function for Development of Unit Hydrograph of Maheshgad Watershed | A.B.Buddawant K.A.Jawade P.A.Karbhari | Dr.A. A. Atre | 2013 | |
| | | Application of ASTER DEM for Geomorphological characteristics of Watershed | Ms.A.K.Nikam Ms.M.N.Satav | Prof.B.K.Gavit | 2013 | |
| | 2014-15 | Comparative Study of Characteristic velocity in GIUH development by using rational method and time of Concentration | Ms.S.A.Khatal Ms.P.S.Mahangade Ms.P.B.Thorat | Dr.A.A.Atre | 2014 | |
| | | Design and Development of Cover, Calibration and field testing of Sediment measuring instrument | Ms.S.S.Chivate Ms.R.R.Gaikwad Ms.A.P.Jadhav Ms.J.G.Lokare | Dr.A.A.Atre | 2014 | |
| | | Study of rainfall Erosivity indices for Rahuri | P.D. Ketkar N.M. Sanap S.S.Patil S.K.Warale | Prof.V.N.Barai | 2014 | |
| | | Hydrolic Study of Rainfall Simulator | Ms.D.A.Bhavsar Ms.Dimple Ms.V.D.Sonawane | Dr.R.D.Bansod | 2014 | |
| | | Trend Analysis of | H.A.Karhode | Dr.R.D.Bansod | 2014 | |

| | | | | | | |
|--|----------------|---|--|----------------|------|--|
| | | Rainfall and Temp. for Pune station | P.A.Karkhile S.A.Kshirsagar | | | |
| | | Studies on Weekly Water Defficiate and Surplus during crop growing season at Ingatpuri in Weaster Ghat Zone. | Ramphol Meena S.D.Sonawane N.M.Waghmare | Dr.M.G.Shinde | 2014 | |
| | | Studies on Rainfall erosivity index for Kolhapur station. | Ms.Pranali Chavan Ms.E.K.Singh O.R.Jadhav F.Khanase | Dr.V.N.Barai | 2014 | |
| | 2015-16 | Analysis of Annual Maximum One day and Extended Days Rainfall for Ambale station | Ms.P.V.Gavit Ms.K.A.Patil Ms.P.D.Thombare B.K.Nimbal | Dr.R.D. Bansod | 2015 | |
| | | Development of relation using average rainfall intensity for modifying curve number | A.S.Navale N.A.Patil B.S.Potphode A.B.Raykar | Dr.A.A. Atre | 2015 | |
| | 2016-17 | Design of Deep CCT, Contour bunds and Loose boulder structure | S.K. Kadam S.G.Shenage N.S.Dharute A.R.Nalawade | Dr.R.D. Bansod | 2016 | |
| | | Study of Micro Watershed and Design of Embankment type farm pond | S.K.Isave P.A.Meshram M.B.Netake S.V.Sangar | Dr.R.D. Bansod | 2016 | |
| | | Effect of Characteristic velocity estimated by Kirpich and SCS-LAG equation on development of NASH model based GIUH | Ms.K.D.Bhosale Ms.N.S.Jadhav Ms.R.D.Parkhe S.H.Phadtare | Dr.A.A. Atre | 2016 | |
| | | Studies on Rainfall Erosivity Index for Solapur station. | S.S.Chavan A.H.Deshmukh S.D.Nangare Ms.S.N.Patil | Dr.V.N.Barai | 2016 | |
| | | Development plan of Micro Water Shed using GIS | S.G.Patil K.N.Pawar P.R.Shelke | Dr.M.V.Shinde | 2016 | |

| | | | | | | |
|-----------|-----------------------------|---|---|-------------------|------|--|
| | 2017-18 | Response of Maiz to different Soil & Water Conservation Practices | F.P.Patil P.M.Pavade D.S.Tukan A.S.Umap | Dr.V.N.Barai | 2017 | |
| | | Response of Cowpea to different soil & Water Conservation Practices | P.R.Dange A.P.Jadhav S.D.Jadhav A.M.Jagtap | Dr.R.D.Bansod | 2017 | |
| | | Analysis of Drainage Morphometry for Dev nadi Watershed using Geospatial Technique | B.H.Patil N.M.Gaurkar B.N.Swami I.V.Misal | Dr.B.K.Gavit | 2017 | |
| B. | M.Tech (Agril.Engg.) | | | | | |
| | 2013-14 | Evaluation of Water Harvesting Structures in Selected Watersheds of Ahmednagar district | G.G. Gadhari | Prof. V. N. Barai | 2013 | |
| | | Water balance Analysis in Maheshgad Watershed using SWAT Model | S.S.Ghotekar | Mr.M.G.Shinde | 2014 | |
| | | Study of the Spectral Behavior of Suspended Sediments using Spectroradiometer | Ms.S.S.Raut | Prof.B.K.Gavit | 2014 | |
| | | Study on Spatial and Temporal Variability of Infiltration and the Spatial soil properties which influence infiltration. | Ms. S. C. Dhawade | Dr.M.G.Shinde | 2014 | |
| | | Studies on Initial Abstraction in curve Number Model. | S.R. Bharate | Dr.A.A.Atre | 2014 | |
| | | Evaluation of Watershed Development using Remote sensing and GIS Technique. | Ms.M.G.Shinde | Dr.A.A.Atre | 2014 | |
| | | Studies on spreading of splashed Material under simulated Rainfall condition. | B.K.Kave | Prof.V.N. Barai | 2014 | |
| | | Estimation of Runoff and Soil loss in | N.K. Sadgir | Dr. M.G. Shinde | 2014 | |

| | | | | | | |
|--|--|--|------------------|------------------|------|--|
| | | Agadgon Watershed using Rs and GIS. | | | | |
| | | Estimation of sediment yield using Remote sensing and Geographical Information System | S.A. Lad | Dr. R.D. Bansod | 2015 | |
| | | Estimation of Soil Erosion changes in land use and land cover using RS. & GIS for MPKV, Central campus. | A.S. Belhekar | Dr. R.D. Bansod | 2015 | |
| | | Application of SWAT model to Predict the effect land use and land cover on Runoff and Sediment yield. | Ms. R.B. Kadlag | Dr.A.A. Atre | 2016 | |
| | | Development of Rainfall Intensity frequency Duration Relationship and Namograph for Solapur and Kolhapur stations. | R.K.Kshirsagar | Dr.V.N.Barai | 2016 | |
| | | Soil and Water Conservation Planning for MPKV Central Campus (wert) using Rs and GIS. | N.R. Kanwade | Dr.R.D.Bansod | 2016 | |
| | | Soil and Water Conservation Planning for MPKV Central campus (East) using Rs and GIS | A.S.Nilvarna | Dr.R.D.Bansod | 2016 | |
| | | Determination of soil Erosibility factor 'k' for soils of Ahmednagar District | G.S. Ajabe | Dr. M. G. Shinde | 2016 | |
| | | Design and Development of Physical model for the Generation of NASH IUH | Ms. T.T. Abhang | Dr.A. A. Atre | 2017 | |
| | | Estimation of Runoff and sediment yield using Remote | Ms.K.B. Bhalerao | Dr. R.D. Bansod | 2017 | |

| | | | | | | |
|----|---------------------------|--|---------------------|----------------|------|--|
| | | sensing and Geographical Information System | | | | |
| | | Sensitivity Analysis of Location Specific Constants in IDF Relationship for Different Locations in Maharashtra | Ms. S. A. Shiradkar | Dr. A. A. Atre | 2017 | |
| C. | Ph.D (Agril Engg.) | | | | | |
| | | Assessment of Environmental flow in the Mula River | V. K. Balsane | Dr.R.D. Bansod | 2016 | |
| | | Studies on Geomorphological Instantaneous unit Hydrograph | D.V. Pandit | Dr. A. A. Atre | 2016 | |
| | | Investigating Probability distributions for modeling direct runoff hydrograph | D.D. Kothawale | Dr. A. A. Atre | 2017 | |