

## BIO-DATA of Dr.P.V.K.JAGANNADHA RAO

1. Name and Designation and Address of the Applicant : Dr. P.V.K.Jagannadha Rao,  
Associate Dean & University Head  
(Dept.of Processing and Food Engineering)  
College of Agricultural Engineering  
Madakasira-515 301 (A.P.)  
Anantapuram District
2. Date of Birth : 15-03-1968
3. Permanent Address : Dr.P.V.K.Jagannadha Rao  
Door No.22-203, Sri Sai Nilayam  
Ganesh Colony  
Sreenivasa Nagar  
Simhachalam road  
Visakhapatnam-530028 (A.P.)  
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5. Length of service in Teaching, Research, Extension and administration:

### Employment record in ANGRAU

Station / Centre (Place of work with full address)	Designation / Post held	Scale of Pay Rs.	Period		Nature of duties
			From	To	
1	2	3	4	5	6
Agricultural Research Station, Maruteru	Scientist	2200-4000	13-09-1993	29-10-1996	Involved in design and development of post harvest equipment related to paddy.
Regional Agricultural Research Station, Chintapalli	Scientist	2200-4000 (1986 UGC) 8000-13500 (1996 UGC)	30-10-1996	13-03-2002	Involved in design and development of post harvest equipment and development of watersheds in tribal areas. <b>Teaching</b> to Agricultural polytechnic college students at RARS, Anakapalli.

Regional Research Station, Anapalli	Agricultural Station,	Scientist In AICRP on Jaggery & Khandsari scheme	10000-15200 <b>12000-18300 (w.e.f. 15-03-2003) Selection grade under CAS</b>	14-03-2002	24-07-2007	Involved in design and development of equipment / machinery for preparation of granular and liquid jaggery. <b>Teaching</b> to Agricultural polytechnic college students at RARS, Anapalli.
Deputed to I.I.T., Kharagpur under the deficiency area of Post Harvest Technology for the period from 25-07-2004 to 24-07-2007 as per the University Proc.No.1068 / Ser.IV/A2/2005 dt.13-06-2005 of the Registrar, ANGRAU, Hyd.						
Regional Research Station, Chintapalli	Agricultural Station,	Senior Scientist	<b>12000-18300</b>	05-02-2007	30-10-2007	Involved in design and development of post harvest equipment related to fruits & vegetables.
Agricultural College, Naira	College,	Associate Professor	37400-67000 (2006 UGC)	01-11-2007	04-02-2010	Teaching to B.Sc (Ag) students related Agricultural Engineering discipline.
Agricultural College, Naira	College,	<b>Professor</b>	37400-67000 (2006 UGC) 10,000/- AGP	05-02-2010	22-02-2014	Teaching to B.Sc (Ag) students related Agricultural Engineering discipline.
Regional Research Station, Anapalli	Agricultural Station,	Principal Scientist (Ag.Engg.)	37400-67000 (2006 UGC) 10,000/- AGP	24-02-2014	04-07-2018	Involved in design and development of equipment / machinery for preparation of granular and liquid jaggery.
College of Agricultural Engineering, Madakasira		Associate Dean	37400-67000 (2006 UGC) 10,000/- AGP	05-07-2018	Continuing	Administration

**Employment record outside ANGRAU:**

Organization	Govt. or Quasi Govt.	Post held and place of work	Scale of pay	Period		Total period	Nature of duties
				From	To		
1	2	3	4	5	6	7	8
Sardar Patel Renewable Energy Research Institute, Vallabh Vidya Nagar, Gujarat	Autonomous	Scientific Officer	2200-4000	04-03-1992	02-09-1993	One year 6 months	Design and development of Zeolite based solar Energy refrigerator, solar drying, solar cookers and solar hot water systems

**Length of Service as on 26-10-2018 in:**

Research:	18 years, 6 months
Teaching:	6 years, 4 months
Administration	3 months
Total Service in ANGRAU	<b>25 years, 1 months</b>
Outside ANGRAU	1 year 6 months
Total Service	26 Years 7 months

**4. Academic qualifications and Subjects of specialization:**

Degree / Diploma certificate	University / Board	College / Place of study	Month / Year of passing
Ph.D (Ag.Engg.) specialization in Post-Harvest Engg.	Indian Institute of Technology (IIT),	IIT, Kharagpur	2009
M.Tech (Ag.Engg.) specialization in Post-Harvest Engg.	Indian Institute of Technology (I.I.T)	IIT, Kharagpur	1991
B.Tech (Ag.Engg.)	ANGRAU Hyderabad	CAE, Bapatla	1989

## 5. Patents: 4

S.No.	Patent Description	Application No.	Date of Filing	Progress
1.	Pneumatic Pressure Paddy Parboiling System	545/CHE/2003	01-07-2003	Patent Granted No.210736 dt.08-10-2007
2.	Process patent on “Process of manufacturing of cane jaggery in crystal form”	729/CHE/2004	26-07-2004	Final Hearing was completed. Awaiting for the grant of patent
3.	Design patent on “mechanized jaggery granulator for making jaggery granules”	1265/CHE/2013	22-03-2013	Requested for patent examination on 23-07-2015.
4.	Design patent on” Mechanized system for preparing Paper Sweet ( <i>Pootharekulu</i> )”	3815/CHE/2016	05-02-2016	Patent was filed

## 6. Awards/Recognitions received, if any, for the research work one done (International/National State and other agencies)

Nominated as **Sectorial Principal Investigator for the Jaggery Sector in India** in the field of Post-Harvest Engineering & Technology.

Acted as technical screening committee (TSC) and SLSC member of Andhra Pradesh Medicinal and Aromatic Plants Board, Guntur for the period from 16-12-2015 to 04-7-2018 through Lr.No.21866/Ser.II/A3/2015 dated 16.12.2015 of the Registrar, ANGRAU, Hyderabad.

Bio-graphical note was published in “**Asia Pacific Who’s Who (Vol.XVI)**” published by Rufacimento International Publisher, New Delhi.

Received “Ugadi Puraskaralu” - “**State Best Research Scientist Award**” from Deputy Director (Operations), FAO, Rome, Italy at Tirupati on 04-04-2015.

Received **VIFRA 2015-Outstanding Research Scientist Award** at Chennai on 19-12-2015.

Awarded “**Dr.I.V.Subba Rao Rythu Nestham Purakshram-2012**” by Dr. D.Purandeswari, Hon’ble Minister of State for Higher Education, Govt.of India at a special function held at FAPCCI Bhavan, Hyderabad on 11-09-2012 organized by Rythunestham Monthly Magazine for the outstanding work in the field of Agricultural Engineering.

Awarded “**The Best Citizens of India Award 2012**” by International Publishing House, New Delhi, is the world’s most leading biographical specialists.

Awarded “**Rashtriya Gaurav Award**” by Dr.Bhishma Narain Singh, Former Governor of Tamilnadu & Assam, at a special function held in Constitution Club, Rafi Marg, New Delhi on 14-02-2012 by the India-International Friendship Society, New Delhi. Rashtriya Gaurav Award and Certificate of Excellence are awarded annually from India-International Friendship Society, New Delhi, to eminent personalities representing different fields from the country and abroad who have contributed remarkably towards progress of India in their respective fields.

Awarded Acharya N.G. Ranga Agricultural University “**Meritorious Research Scientist Award**” on 19-02-2005 for the year 2002-03.

Received Sri.Konathala Ramunaidu B.Com., Memorial Prize and adjudged as “**Best Research Officer**” on 06-02-2003 during the year 2002.

## **7. Outstanding contributions in Research during the last five years:**

Semi-mechanized system for production of good quality jaggery under hygienic conditions was developed.

A **20 Kg. and 1000 kg Capacity Pneumatic Pressure Parboiler** was designed and developed, which reduces the parboiling time from 8 hrs (in CFTRI method) to 2.5 hrs and produces white colour, soft textured parboiled rice. The process was patented (**Patent was granted, No.210736**).

Developed the process technology for the preparation of jaggery granules. The patent was filed (**Patent File No.729/CHE/2004**).

A **Agricultural waste based mechanical tray dryer, hand operated granular jaggery making machine and batch type mechanical sieving machine** were developed for the production of granular jaggery at farmer’s level. Patent was filed (**Patent File No.1265/CHE/2013**).

The machinery for establishment of a pilot plant for production of solid, liquid and crystal jaggery was fabricated and installed with the funds of ICAR to impart training to the farmers.

Designed and developed mechanized system for the production of paper *sweet (pootharekulu)* which could replace traditional method of making paper *sweet (pootharekulu)*. Patent was filed (Application No.201641004262 dt.05-02-2016).

**Standardized the process technology for the preparation of various value added products** from jaggery i.e., jaggery chocolates, oats-jaggery cookies, jaggery cakes, jaggery based mouth fresheners, jaggery with sugarcane juice jellies, pineapple with jaggery powder jellies, tomato powder, tomato ketchup powder and jaggery rasagolla.

Associated in development of **steam boiling system for the preparation of quality jaggery under hygienic conditions**. The whole system could be used for the production of 320.0 kg jaggery in a day and reduces the boiling time by 20% as compared to farmer's practice of traditional boiling (240 kg jaggery in a day). Also it produces export quality jaggery with golden yellow colour.

Process technology for the preparation of various value added products from tomato has been developed.

Associated in development of process process technology for bottling of **sugarcane juice as beverage** for prevalent sugarcane varieties of RARS, Anakapalle.

Associated in development of novel technology for the **compression of granular jaggery into tablets** for usage in beverages.

Associated in **standardization of packaging methods** i.e Modified Atmospheric Packaging and Vacuum packaging and packaging materials for packing granular Jaggery.

**A complete mechanized process technology** for preparation of granular jaggery from sugarcane, palmyra-palm and date-palm juices has been developed based on scientific and technological study on existing traditional process.

**Critical parameters related to the uniform quality of the finished jaggery** have been arrived that would replace the age-old thumb-rule approach of skill labour with measured parameters.

**Detail study on physical and thermo-physical properties of three types of granulated jaggery** (Sugarcane, Palmyra-palm and Date-palm) along with its sorption characteristics and glass transition temperatures yielded the critical range of storage moisture contents.

**A set-up to determine the sticky point temperature ( $T_{sc}$ )** of three granular jaggery samples at different moisture contents (0 - 4.3 %db) using Brookfield Viscometer fitted with a T-bar spindle was developed.

**Substantial improvement in handling and organoleptic quality of granular jaggery** has been arrived with optimum addition of corn starch and tri-calcium phosphate as anti-caking agent.

**A manual-cum-power operated 20 kg capacity granulator has been designed** on the basis of these scientific and technological inputs. The operational speed and moisture content were optimized with field trials using sugarcane jaggery (Var. Co 85 A 298).

**A Power tiller (or 2 Hp electrical motor) operated winnower** was designed and fabricated for cleaning tractor threshed paddy. The capacity of winnower is 30 bags of paddy per hour. It was popularized in East and West Godavari districts.

A **low cost Grain Puffing Machine** operated with agricultural waste was designed and fabricated for making puffed grains, which is very useful for rural women. It was popularized in tribal areas of Visakhapatnam district.

**Zero Energy Cool Chamber was designed** and developed to increase the shelf life of vegetables and fruits for the tribal area. It was recommended to the tribal farmers for short term storage of fruits and vegetables.

A **low cost solar dryer was developed** for drying of coffee berries, which is very useful to the tribal farmers. Seventy two (72%) percent of time is saved and good quality coffee berries are obtained as compared to farmer's practice of open sun drying.

A simple **low cost sieving technique** was evolved for separation of cuscutta weed from niger seed. Cuscutta is a dreadful parasitic weed which affects the niger crop yield by 45%. It was published in ANGRAU highlights.

**Tomato powder was prepared** from tomato pulp of following varieties, HYT-1, Pusa Ruby, HYTH-1 and Arkameghali without affecting the quality.

**Different types of threshing methods** i.e., Rasp bar thresher, Axial flow thresher, Hand beating and tractor threading **were evaluated** for their threshing and cleaning efficiency at different moisture contents. This information is quite useful to the farmers in choosing threshing method for paddy.

## **8. Project Approved and Executed:**

### **(a) Projects Planned and submitted as Chief Investigator with details:**

Executed a National Agricultural Technology Project (NATP) on "Evaluation and Standardization of Pneumatic Pressure Parboiling of Paddy" under Competitive Grant Programme as **Principal Investigator**. It was sanctioned with an outlay of **19.54024** lakhs as per the Lr.No.25770/ Res.I(3)/2000 dt. 2-8-2000 of Director of Research, ANGRAU,Rajendranagar, Hyderabad.

Executed a NATP project "Participatory and Integrated assessment of natural resources and Evaluation of alternate sustainable management options for tribal dominant watershed" under Rainfed Rice Production System as **Co-Operating centre Co-Principal Investigator**. It was sanctioned with an outlay of **26.35275** as per the Lr.No.28872/Res.I (3)/2000 dt.26-8-2000 of Director of Research, ANGRAU,Rajendranagar, Hyderabad.

### **(b) Projects completed as Chief Investigator with details:**

National Agricultural Technology Project (NATP) on "Evaluation and Standardisation of Pneumatic Pressure Parboiling of Paddy" was successfully completed, filed patent on "Process and design of Pneumatic pressure Paddy Parboiling System" and patent was granted.

NATP project “Participatory and Integrated assessment of natural resources and Evaluation of alternate sustainable management options for tribal dominant watershed” under Rainfed Rice Production System was successfully implemented at Kolapari village, Chintapalli mandal.

## **9. Research Publications:**

**International : 6; National : 45; Research Notes (International): 2**

## **10. List of books, bulletins, status reports and popular articles**

### **Published:**

**Books: 12; Pamphlets: 13; Popular Articles: 22; Other Publications: 8;**

**All India Radio Interviews: 20; Telecasts: 03; Course material prepared: 4**

## **11. Papers presented to Conferences/Seminars/ Symposia at State/ National and International Level:**

Papers presented in International Conference: **Four**

Papers presented in National Conference: **32**

## **12. Field Application of Findings:**

**Developed the process technology and machinery for the preparation of granular jaggery. The technology was transferred to the following entrepreneurs through MOU**

1. MOU with M/s. VOWELS AGROTECH, A/P Tasgaon, Shree Samartha Bunglow, JotirlingNagar, Tasgaon Dist. Sangli, Maharashtra- 416312, INDIA on 24-07-2014.
2. MOU with M/S Chakravarthy Agro Foods Private Limited., represented by Sri D.Prasanna Kumar, S/O D.Rama Krishna Reddy residing at 19-8-42, Hati Ramji Colony, Tirupati on 14-5-2015.
3. MOU with M/s KVL Bio Products Pvt. Ltd., represented by the Chairman & Managing Director, Smt Kolli venkata Lakshmi, W/o Kolli Venkata Narasimha Rao, Flat No. 102, Matrix Synergy Apartment, geeta Nursing Home Lane, West Marredpally, Secunderabad 500 026, telangane on 21-9-2015
4. MOU with M/S Anusha Agro Industrial Products, Near Mungalavarapupeta, Munagapaka, Visakhapatnam district for liquid jaggery making on 4-9-2014.
5. MOU with M/S Jayalakshmi Agro Industries, Kundrum, Rajam, Buttchayyapeta Mandal, Visakhapatnam dt., on 18-5-2016.



### **13. Membership and Fellowship of professional societies with year of enrollment:**

Executive Member of American Society of Agricultural Engineers, enrolled in 2004 .

Life member of Indian society of Agricultural Engineers, enrolled in 2004.

Association of Food Scientists and Technologists India, enrolled in 2015

Life Member of Asian PGPR Society of Sustainable Agriculture, enrolled in 2016

### **14. Any other information:**

Conducted Group Meeting of AICRP on PHET, Jaggery Sector at RARS, Anakapalli on 17-11-015 in which the scientists from Kolhapur and Lucknow and Project Coordinator was participated to discuss regarding modernization of jaggery industry.

Conducted Interactive Session on “Farm Mechanization and Post-Harvest Technology” on 20-03-2015 at RARS, Anakapalli to identify the problems and constraints in farm mechanization for the benefit of farmers.

Organized Kisan Mela on Farm Mechanization and Post-Harvest Technology at RARS, Anakapalli on 14-5-2016 for the benefit of 1200 farmers.

Conducted Kisan Mela on “Farm Mechanization and Post-Harvest Technology” on 14-05-2015 at RARS, Anakapalli for the benefit of farmers.

Conducted Technology and Machinery Demonstration Mela in collaboration with PHET, Bapatla on “Farm Mechanization and Post Harvest Technology” at RARS, Anakapalle on 10-02-2017

### **M.Tech /Ph.D students guided:**

1. Guided Mr.Dilip Kumar Ojha, M.Tech student of College of Agricultural Engineering, Bapatla on “Storage of jaggery at different storage temperatures” during the year 2009-2010.

2. Guided Mr.B. Aswin Kumar, M.Tech student of College of Agricultural Engineering, Bapatla on “Modification of ANGRAU hand operated Maize Sheller for Enhanced Capacity” during the year 2012-2013.

3. Guided Mr.B.Madhu,, M.Tech student of IGKV, Raipur (Chattisgarh) on “Effect of edible coatings on shelf-life of jaggery” during the year 2016-2017.

4. Guided Ms.K.Nagamani, M.Tech student of College of Agricultural Engineering, Bapatla on “Development of process technology for clarification and preservation of sugarcane juice” during the year 2016-2017.

5.Guided four third year students of Diploma in Ag.Engg, Prof. Jaya Shankar Telangana state Agricultural university, Rajendranagar were joined in AICRP on PHT centre on 19-11-2014 as a part of internship and pursued project on “Jaggery processing and value addition”.

6. Guided four batches of third year students of Diploma in Ag.Engg, RARS, Anakapalli for the period from 12-3-2016 to 25-4-2016 as a part of internship and pursued projects on

- (i) Design and development of low cost sugarcane crusher;
- (ii) Studies on prevailing Jaggery production practices & identification of problem areas;
- (iii) Designing and performance evaluation of zero energy based bicycle powered boom sprayer.
- (iv) Testing and evaluation of low capacity self propelled brush cutter cum harvester for harvesting paddy.

7. Guided four batches of third year students of Diploma in Ag.Engg, RARS, Anakapalli for the period from 12-3-2017 to 25-4-2017 as a part of internship and pursued projects on

- (i) Development of process technology for the preparation of various value added products from sugarcane;
- (ii) Testing and evaluation of budchip planter, cutter planter and easy planter for sugarcane planting;
- (iii) Development of process technology for the preparation of Jellies from sugarcane and pineapple juices;
- (iv) Development and evaluation of solar insect trap.

At present, guiding Ph.D student Mrs.Padma, College of Agricultural Engineering, ANGRAU, Bapatla and Mr.Eresh Kumar, Ph.D student of IGKV, Raipur

#### **Number of training Programmes / Workshops attended: 9**

Attended one month summer school on “Network Management and Informatics” at Indian Agricultural Statistical Research Institute (ICAR), New Delhi for the period from 26-05-1997 to 24-06-1997.

Attended a course on “Windows 95, Ms Office and LAN” at NAARM, Hyderabad from 31-07-1997 to 08-08-1997.

Attended NATP (CGP) workshop at Assam Agricultural University, Jorhat, Assam for the period from 07-04-2002 to 13-04-2002 and presented progress of work on “Evaluation and Standardisation of Pneumatic Pressure Parboiling of Paddy” in presence of National Coordinator.

Attended training programme on ‘**Patenting in India & Abroad**’ from 17-1-2003 to 18-01-2003 at Hyderabad organized by APTDC, Govt.of A.P. and Confederation of Indian Industry.

Attended 4 days training programme on patent procedures from 26.06.2007 to 29.06.2007 at WTO cell, Rajendranagar, Hyderabad.

Attended short term course on "**Innovative food processing technologies**" for 12 days for the period from 04-10-2004 to 15-10-2004 at IIT, Kharagpur.

Attended one day training programme on “sub surface irrigation” at ARS, Anantpur on 22-06-2011

Attended one day work shop on “AELP (Agricultural Experiential Learning Programme) stack holders meet” on 25-06-2011 at University Auditorium, Rajendranagar, Hyderabad.

Attended fifteen days training programme on “MSRI Cultivation” at ARS, Mannutty, Kerala State.

Attended 30<sup>th</sup> Annual workshop meeting of AICRP on PHET held at University of Agricultural Sciences, Bangalore for the period from 06-01-2015 to 09-01-2015 and presented progress work of AICRP on PHET centre, Anakapalli .

Attended 31<sup>st</sup> Annual workshop meeting of AICRP on PHET held at Tamila Nadu Agricultural University, Coimbatore for the period from 04-01-2016 to 06-01-2016 and presented work done report for the year 2015 and also presented the proposed technical programme for the year 2016 pertaining to AICRP on PHET centre, Anakapalli .

Attended 32<sup>nd</sup> Annual workshop meeting of AICRP on PHET held at CIPHET, Ludhiana for the period from 07-03-2017 to 09-03-2017 and presented work done report for the year 2016 and also presented the proposed technical programme for the year 2017 pertaining to AICRP on PHET centre, Anakapalli.

Attended Quinquennial review team (QRT) workshop meeting of AICRP on PHET for the period of 2012-2017 and presented the progress of work of AICRP on PHET Centre, RARS, Anakapalli QRT work shop of AICRP on Post Harvest Engineering & Technology held at University of Agricultural Sciences, Bangalore during 7-9<sup>th</sup>, August 2017.

#### **Details of Guest Lectures Delivered:**

Attended ZREAC meeting of NC Zone on 17-03-2008 and delivered special lecture on “**Improved Agricultural Implements for the NC zone**” for the benefit of Scientists, A.O’s and farmers.

Attended ZREAC meeting of HAT Zone on 02-08-2008 and delivered special lecture on “**Improved Agricultural Implements for the HAT zone**” for the benefit of Scientists, A.O’s and farmers.

Attended ZREAC meeting of NC Zone on 17-03-2009 and delivered special lecture on “**Farm mechanization in sugarcane crop**” for the benefit of Scientists, A.O’s and farmers.

Delivered special lecture on “**Aadhunika Vyavasayanki panimuttlu, Yantralu**” for the benefit of A.O’s, AEO’s and farmers at FTC , Srikakulam on 18-09-2009.

Attended ZREAC meeting of HAT Zone on 08-03-2010 and delivered special lecture on “**Low cost Agricultural Implements for the HAT zone**” for the benefit of Scientists, A.O’s and farmers.

Delivered special lecture on “**Jaggery preparation from different sources and value added products**” for the benefit of Final year students of B.Tech (Ag.Engg.) students of College of Agricultural Engineering, Bapatla on 13-05-2010.

Delivered special lecture on “**Aadhunika Vyavasayanki panimuttlu, Yantralu**” for the benefit of A.O’s, AEO’s and farmers at Rythuchaitanya yatralu in Narasannapeta mandal from 22-05-2010 to 25-05-2010.

Delivered guest lecture to the women farmers at FTC, Srikakulam on 27-10-2010 on “**Agricultural Implements and Post Harvest Technology**” as a part of training programme on “Farm Women Empowerment Training Programme”.

Attended training programme on “**Post Harvest Technology**” organized by Indian Institute of Crop Process Technology and KVK, R.K. Bai for the farmers of Vizianagaram District and delivered guest lecture on “**Post Harvest Technology of Field Crops**” on 19-09-2011.

Attended training programme on “Post Harvest Technology” organized by Indian Institute of Crop Process Technology and DAAT Centre, Srikakulam for the farmers of Srikakulam District and delivered guest lecture on “**Post Harvest Technology of Field Crops**” on 26-09-2011.

Attended training programme organized by KVK, Amudalavalasa in view of Technology week and guest lecture was delivered on “**Mechanization in Agriculture**” for the benefit of farmers on 22-12-2011.

Attended training programme organized by Extension department, RARS, Anakapalli in view of Technology week and guest lecture was delivered on “**Implements & Machinery suitable for sugarcane cultivation**” for the benefit of farmers on 30-12-2011.

Attended workshop on 10-03-2012 for Micro & Small Scale Entrepreneurs organized by DRDA, Srikakulam and delivered guest lecture on “**Granular Jaggery Preparation**” along with AELP students.

Attended workshop on food processing at Visakhapatnam organized by National Institute for Micro, Small and Medium Enterprises, Yousufguda, Hyderabad on 31-03-2012 and delivered guest lecture on “**Granular Jaggery Preparation**” to the entrepreneurs.

Attended a training programme to the IKP Mandal Coordinators at MDO Office, Srikakulam and delivered guest lecture on “**Granular Jaggery Preparation**”.

Attended ZREAC meeting of High Altitude & tribal Area (HAT) Zone at Parvathipuram and delivered guest lecture on “**Implements & Machinery suitable for HAT zone**” on 04-04-2012.

Attended ZREAC meeting of Godavari Zone at Tadepalligudem and delivered guest lecture on “**Mechanization and value addition in Rice**” on 12-04-2012.

Attended training programme at Krishi Vignan Kendra, Rastakuntubai on 16-10-2012 and delivered guest lecture on “**MSRI Cultivation**” in the farmers meeting to promote MSRI cultivation using mechanical transplanters and also on “**improved Agricultural Implements & Machinery suitable to High Altitude and Tribal Area Zone**”.

Attended training programme and Agricultural Implements & Machinery Exhibition on 29-10-2012 at Vizianagaram in the premises of A.P.Agros building, Vizianagaram organized by Regional Manager, A.P.Agros Ltd., Vizianagaram for the benefit of farmers in the Vizianagaram district and delivered guest lecture on “**Agricultural Implements & Machinery**” suitable for Vizianagaram district and MSRI cultivation”.

Attended farmer’s meeting on 18-12-2012 on “**Yantra Lakshmi**” at Ag.College, Naira organized by Department of Agriculture, Srikakulam district and delivered guest lecture on ‘**Improved Agricultural Implements & Machinery** suitable to Srikakulam District’ for the benefit of farmers.

Attended training programme at Isukula Palem, Sompeta on 19-12-2012 organised by DAAT Centre, Srikakulam and delivered guest lecture on “**MSRI Cultivation**” in the farmer’s meeting to promote MSRI cultivation.

Attended training programme on 01-03-2013 organized by KVK, Amadalavalasa at Agricultural College, Naira for the farmers of Nehru Yuvak Kendra and delivered guest lecture on “MSRI Cultivation” using mechanical transplanters.

Attended training programme organized by KVK, Amadalavalasa in view of Technology week and guest lecture was delivered on “**Mechanization in Agriculture**” for the benefit of farmers on 18-12-2013.

Attended interaction meeting at Tadepalligudem with Rice miller’s of West Godavari Zone and delivered guest lecture on “Pneumatic pressure parboiling system” on 21-12-2013.

Attended the training programme on “**Agri clinic & Agri Business**” in the field of agricultural engineering as resource person on 15-04-2014 at JAGRUTI Foundation for rural development, Anakapalli.

Attended the training programme on “Value addition in jaggery & implements and machinery suitable for mechanization in sugarcane” as resource person on 09-02-2015 arranged by Food and Agribusiness school, Hyderabad at RARS, Anakapalli.

Attended the training programme on “Value addition in jaggery” as resource person on 19-02-2015 arranged by KVK and DAATTC, Srikakulam of ANGRAU at RARS, Anakapalli.

Attended the training programme on “Value addition in jaggery” as resource person on 28-05-2015 arranged by M/s EID Parry Limited, Sankili.at RARS, Anakapalli.

Arranged Interactive session meeting on “Mechanization in Agriculture and Post-harvest technology” at RARS, Anakapalli on 20-03-2015 and presented power point on “Farm mechanization and post-harvest technology” to the Scientists and farmers.

Attended training programme to cane field staff of M/s EID Parry Limited, Sankili on and delivered guest lecture on “Sugarcane mechanization” on 28-5-2015.

Attended training programme on “Farm Mechanization” and delivered lecture on “ Improved Agricultural Implements and Machinery” to recently recruited MPEO’s at Farmers Training Centre, Anakapalle on 12-6-2015.

Delivered guest lecture on “Farm mechanization in different crops” to the reliance staff at Jubilee hall, RARS, Anakapalle on 17-7-2015.

Attended training programme on “Mechanization in raising of budchip seedlings of sugarcane” to the farmers of Visakhapatnam district on 24-7-2015 as a part of ATMA training programme. Arranged demonstration on working of sugarcane leaf stripper and budchip planter to the farmers on 24-7-2015.

Demonstrated the working of sugarcane leaf stripper and budchip planter to the Officials of Department of Agriculture, Visakhapatnam district at RARS, Anakapalle on 30-9-2015.

Conducted training programme on quality jaggery making to the jaggery making farmers at Thimmarajupeta on 28-10-2015 and 29-10-2015.

Demonstration on “Working of paddy thresher” was conducted to the farmers at Chuchukonda village on 28-11-2015.

Attended tribal farmers meeting at Paderu, Visakhapatnam district on 4-12-2015 and delivered lecture on “improved farm implements and machinery suitable for high altitude and tribal area zone”.

Attended farmers meeting on Farm mechanization at Narsipatnam on 10-12-2015 and delivered lecture on farm mechanization and jaggery making and released pamphlet on “sugarcane mechanization”.

Attended inaugural function of IFFCO training programme on 9-12-2015 and delivered lecture on farm mechanization and jaggery making on 11-12-2015.

Attended training cum demonstration of “farm machinery arranged by department of Agriculture at RARS, Anakapalle and delivered special lecture on “Farm mechanization in sugarcane” to the farmers. Released pamphlets on “Mechanization in Paddy” in presence of Hon’ble MLA of Anakapalle on 12-12-2015.

Conducted training programme on quality jaggery making and value addition to the 30 No. farmers of Bhupalapatnam village, Kirlampudi mandal, Jaggampeta constituency, East Godavari district on 29-1-2016.

Conducted training programme on quality jaggery making and value addition to the 30 No. farmers of Visakhapatnam district on 30-1-2016.

Conducted training programme to 30 no. farmers and quality jaggery making and value addition on 4-2-2016 at ARS, Seethampeta.

Conducted demonstration and training programme to 30 no. farmers and quality jaggery making and value addition on 8-2-2016 at ARS, perumalapalle.

Attended training programme at Madugula on Farm Mechanization on 22-3-2016 at Satyavaram village, madugula mandal, Visakhapatnam dt, arranged by Department of Agriculture.

Conducted training and demonstration at Badangi village, near Rambhadrapuram ,Vizianagaram district on quality jaggery making on 26-3-2016.

Conducted demonstration on Ratoon Management Device at RARS, Anakapalli on 30-3-2016 for the benefit of Scientists and farmers.

Delivered guest lecture on “Farm Mechanization” and Quality jaggery preparation” to the farmers from Srikakulam district at PHET lab, RARS, anakapalli on 11-4-2016.

Attended ZREAC meeting at Vizianagaram on 12-4-16 and 13-4-16 and delivered guest lecture on “Farm Mechanization” and Quality jaggery preparation” for the benefit of scientists, officials from department of agriculture and farmers.

Attended training programme and delivered lecture on “Mechanization in Sugarcane” to the field staff of M/s The Vijayarama Gajapathi Co-operative Sugar factory, Bhimasingi at RARS, Anakapalle on 2-6-2016.

Attended training cum demonstration on “Improved machinery” and training on Jaggery and its value addition to the farmers on 17-6-2016 as a part of training programme for six days for the farmers on “ INM in major field crops”.

Conducted and involved in a training programme on “the quality jaggery making, value addition and value added products of jaggery and mechanization in agriculture” to the innovative farmers of different districts who visited the AICRP on PHET centre, RARS, Anakapalle on 28-07-2016.

Conducted a training programme on “Post harvest technology and farm mechanization” along with Dr.P.Jamuna, and delivered delivered lecture on post harvest technology to the farmers at Lakkavaram on 21-09-2016.

Explained about equipment and machinery suitable for sugarcane mechanization and technologies of quality jaggery making and value addition to the farmers of Bhimasinghi sugar factory area at RARS, Anakapalle on 01-10-2016.

Conducted demonstration on sugarcane leaf stripper to the farmers of Chuchukonda village, Munagapaka mandal at Chuchukonda village on 24-10-2016.

Conducted a training programme on “ Quality jaggery preparation, value addition and mechanization” to the farmers of Kintali village, Vaddadi Madugula mandal, Visakhapatnam dt held at Kintali village on 05-11-2016.

Conducted a live demonstration on “Combine harvester” to the farmers of Chuchukonda village, Munagapaka mandal held at Chuchukonda village on 26-11-2016.

Explained the technologies of rice mechanization and post harvest equipment in rice cultivation to the farmers during the training programme and conducted demonstration on “growing of mat nursery for transplantation using mechanized paddy transplanters” to the farmers at Extension department, RARS, Anakapalle on 06-12-2016.

Conducted demonstration of sugarcane leaf stripper to the Deputy Cane Commissioner, A.P. Commissionerate of Sugars and Asst. Cane Commissioners of different districts of Andhra Pradesh at RARS, Anakapalle on 09-12-2016.

Conducted training programme on “Quality jaggery preparation and value addition and mechanization” to the 50 farmers at RARS, Anakapalle on 21-12-2016.

Conducted training programme on “Quality jaggery preparation, value addition and mechanization” to the 50 farmers at Bahavani nagar, S. Kota, Vizianagaram dt on 22-12-2016.

Conducted training programme on “Quality jaggery preparation, value addition and mechanization” to the 50 farmers to the farmers of Srikakulam dt at Nimmatroluwada, Srikakulam dt. on 29-12-2016.

Conducted demonstration of deep ploughing by using reversible plough to the farmers of Chuchukonda village, Munagapaka mandal on 01-01-2017.

Conducted the demonstration of mechanized planting using sugarcane budchip planter in farmer’s field in raised nursery in farmer’s field at chuchukonda on 07-01-2017.

Organized Technology and Machinery Demonstration Mela in collaboration with PHET, Bapatla on Farm Mechanization and Post Harvest Technology at College of Agricultural Engineering, Bapatla to the farmers, scientists and entrepreneurs of Andhra Pradesh held at RARS, anakapalli on 10-02-2017.

Conduct training programme and demonstration on “Quality jaggery making” to the farmers of East Godavari district at tatiparti, peddapuram mandal, East Godavari dt on 22-02-2017.

Conducted the demonstration of juice filtration system procured from M/s AB Engineers, Ludhiana at RARS, Anakapalle on 18-03-2017.

Attended ZREAC meeting of HAT zone on 18-4-2017 at RARS, Chintapali and delivered lecture on “Suitable machinery and equipment for the various post-harvest operations” for the benefit of farmers.



Attended ZREAC meeting at Agricultural College, Naira on 20-4-2017 and released a book on “Modern Jaggery Processing Methods to Prepare Jaggery and Its Value Added Products” in the meeting. Participated in the discussions.

Delivered guest lecture on “Machinery/equipment suitable for rice and sugarcane cultivation” to the Polytechnic College Students of Agricultural Engineering, Anakapalli on 28-4-2017.

Conducted field demonstration of Honda power weeder (Model: GX160, 4 stroke petrol engine) in the field No.2A (part) on 17-6-2017 for the benefit of scientists.

Delivered guest lecture on “Machinery/equipment used in sugarcane cultivation” to 500 no.s of farmers of Visakhapatnam district in “Rythu Avagahana Sadassu”, held at Anakapalli on 09-07-2017.

Delivered special lecture on “Farm Mechanization and Post-harvest Technology” for the benefit of Agricultural Polytechnic students in RARS, Chintapalli on 18-7-2017.

#### **Farmer’s Meetings:**

Participated and organized five days training programme on “Technologies for jaggery processing and value addition” sponsored by the Odisha Government from the period of 25-02-2014 to 01-03-2014.

Participated in “**Adarsha Rythu**” Training programme on 25-03-2008, 01-04-2008 and 18-04-2008 at Rythu Mahila Pranganam, Etcherla and imparted training on “Improved Agricultural Implements & Machinery” to Adarsha Rythulu of Etcherla mandal of Srikakulam District.

Participated in “**Adarsha Rythu**” Training programme on 11<sup>th</sup> and 12<sup>th</sup> May 2007 at Farmers Training Centre, Anakapalli and imparted training on “Improved Agricultural Implements & Machinery” to Adarsha Rythulu of Anakapalli mandal, Visakhapatnam dt.

Participated in “**Adarsha Rythu**” Training programme on 15-10-2007 at RARS, Chintapalli and imparted training on “Improved Agricultural Implements & Machinery suitable to HAT zone” to Adarsha Rythulu of G.K.Veedhi mandal, Visakhapatnam dt.

Arranged RARS, Chintapalli exhibition stall in the kisan mela organized at RARS Anakapalli on 3-03-2007 and 4-03-2007 and explained the research activities of RARS, Chintapalli to the farmers, who visited the stall.

Arranged exhibition stall at Arakuvalley of Visakhapatnam district in view of Rythu Sadassu on 8-06-2007 and explained improved agricultural implements & machinery suitable to tribal belt of Visakhapatnam district to the farmers, who visited the stall.

Participated in Rythu Chaitanya Yatras sponsored by Govt.of AP from 20-5-2007 to 5-6-2007 at Gudam and koyyuru mandal of Visakhapatnam dt. and explained improved agricultural implements & machinery suitable to tribal farmers.

Participated in Janmabhoomi programme on 03-06-2002 in Yelamanchili mandal, Visakhapatnam district and imparted training on “Improved Agricultural Implements & Machinery” to the farmers.

Participated in Janmabhoomi programme on 04-06-2002 in Ramballi mandal, Visakhapatnam district and imparted training on “Improved Agricultural Implements & Machinery” to the farmers.

Participated in Janmabhoomi programme on 05-06-2002 in Narsipatnam mandal, Visakhapatnam district and imparted training on “Improved Agricultural Implements & Machinery” to the farmers.

Participated in Janmabhoomi programme on 07-06-2002 in Ravikavatham mandal, Visakhapatnam district and imparted training on “Improved Agricultural Implements & Machinery” to the farmers.

Participated in Janmabhoomi programme on 08-06-2002 in Makavarapalem mandal, Visakhapatnam district and imparted training on “Improved Agricultural Implements & Machinery” to the farmers.

Participated in the training programme organized by Regional Agricultural Research Station, Anakapalli to the women farmers of Venkupalem Village, Anakapalli mandal on 07-03-2003 and imparted training on quality jaggery making.

**(vi) Duties as Chairman in Research / External Committee Member:**

Acted as External Examiner for evaluation of project dissertations and conducted Viva---Voce – Voce to the M.Tech (final year students) of 2010-2012 batch in the specialization of Food Engg., at Indian Institute of Technology, Kharagpur, West Bengal State for the period from 01-05-2012 to 02-05-2012. Evaluated the following titles of thesis:

- (i) Design and structural analysis of pressure vessel and pressure intensifier for high pressure food processing equipment by Patil Vikas Keshav
- (ii) Effect of drying on total antioxidant activity of jamun pulp by Nibha Kumari
- (iii) Flow behaviour of Aloe Vera juice with added gums by Sargar Sandip Ananda.

Acted as External Committee Member at BCT-KVK at Harapuram on 06-11-2012 and conducted interviews for the post of “Subject Matter Specialist” in the dept. of Ag. Engineering.

Acted as External Examiner for evaluation of project dissertations and conducted Viva-Voce to the Dual-Degree M.Tech (final year students) in the department of Food Processing Technology in GITAM University on 25-04-2013.

Evaluated the research paper on “**Optimization of the amount of amylose, methylcellulose and hydroxypropylmethylcellulose for maximum tensile strength and minimum water vapour**”

**permeability of corn starch based self-supporting films**” as per the request of the Editor, Indian Journal of Chemical Technology, NISCAR, New Delhi.

Evaluated Ph.D thesis on **“Development and Characterization of Barley Flaxseed Based Functional Dry Soup Mix”** of Ms. Sumeet Kaur (AG 5125) as per the request of **Dean of P.G.Studies, IIT, Kharagpur** as per Letter No.IIT/Acad (PGS and R)/F-II/2/ag5125 dt.06-09-2013 and also conducted Final Viva-Voce on 16-12-2013.

Acted as External Examiner for evaluation of project dissertations and conducted Viva-Viva –Voce to the of Dual-Degree M.Tech (final year students) in the department of Food Processing Technology in GITAM University on 29-4-2014.

Acted as a **Co-convenor** for AGRIENGGCET-2017 and involved in scrutiny and finalization of sets of question papers for the conduct of AGRIENGGCET-2017.

Evaluated M.Tech thesis on **“Pilot Scale Study for Enhancement Patchouli Essential Oil Quantity & Quality Using Biotransformation Process”** of Swami Vivekananda College of Agricultural Engineering & Technology & Research Station, IGKV, Raipur as per the request Dean of IGKV, Raipur.

Evaluated M.Tech thesis on **“Comparative Analysis of Selected Varieties of Paddy for Suitability of Flaking”** of Swami Vivekanand College of Agricultural Engineering & Technology & Research Station, IGKV, Raipur as per the request Dean of IGKV, Raipur.

Acted as Convenor for M.Tech (Ag.Engg) Entrance Examination-2018 and successfully conducted the entrance examination.

Acted as Convenor for the Ph.D. entrance examination pertaining to Agricultural Processing and Food Engineering discipline and evaluated entrance examination answer scripts at APGC Lam on 09.07.2018 and successfully conducted the interviews on 10.07.2018.

Attended viva-voce examination of M.Tech. (Food Technology) Students of JNTU, Kakinada on 13.08.2018 as an External Examiner.

### **Other Responsibilities:**

Arranged exhibition stall on jaggery and its value added products in Vizag Fest at AU Coole of Engineering, Visakhapatnam for the period from 10-19<sup>th</sup> April' 2015.

Organized and attended group meeting of AICRP on PHET of jaggery sector, at RARS, Anakapalle on 17-11-2015. The Project Coordinator and scientists of other AICRP on PHET centres i.e., Lucknow, Kolhapur and Bapatla attended the meeting. Reviewed the technical programme and finalized the consortium mode project work on “Development of mechanized system for production of jaggery”.

Made necessary arrangements for 38<sup>th</sup> Kisanmela as Convener for Agricultural Exhibition Committee. Also arranged stall to displayed post harvest technologies and various farm machinery and implements and jaggery products on 26 and 27<sup>th</sup> , February, 2016.

Attended Kisanmela at RARS, Anakapalli on 18-3-2016. Arranged exhibition stall displaying various farm machinery and value added products of jaggery. Delivered guest lecture on farm mechanization and value added products of jaggery for the benefit of 1000 No.s farmers.

Arranged exhibition stall for displaying various technologies of AICRP on PHET at APRRI, Maruteru, West Godavari, A.P., inview of Kisanmela at Maruteru on 24-3-2016.

Arranged exhibition stall depicting various jaggery value added products and improved machinery for the benefit of farmers on the occasion “Navanirmana deeksha” meeting on 5-6-2016 at RARS, Anakapalle. Hon’ble MLA Sri. P.Govind Satyanarayana, Anakapalle Constituency attended the meeting.

Arranged exhibition stall for displaying various value added products of Jaggery of AICRP on PHET at APRRI, Maruteru, West Godavari, A.P., in view of Kisanmela at Maruteru on 04-04-2017.

Arranged an exhibition stall for displaying various value added products of Jaggery of AICRP on PHET at “Athmiyya Sadassu”, held at Anakapalli, on 14-04-2017.Hon’ble Chief Minister Sri Nara Chandra Babu Naidu garu attended the meeting, visited the stall and interacted with Scientists.

Arranged an exhibition stall for displaying various value added products of Jaggery of AICRP on PHET at AU Engg. College grounds, Visakhapatnam from 29-05-2017 to 30-05-2017.Hon’ble Chief Minister Sri Nara Chandra Babu Naidu garu attended the meeting, visited the stall and interacted with Scientists.

Arranged Farm machinery and an exhibition stall for displaying various value added products of Jaggery of AICRP on PHET, RARS, Anakapalle in “Eruvaka Programme” on 09-6-2017 held at RARS, Anakapalli. Hon’ble MP and MLA are the chief guests of the function.

(P.V.K.Jagannadha Rao)  
Associate Dean  
College of Agricultural Engineering  
Madakasira