TAMIL NADU AGRICULTURAL UNIVERSITY

Office of the Directorate of Research,
Tamil Nadu Agricultural University,
Coimbatore 641 003

Date: 19.02.2019

PROCEEDINGS

A review meeting was conducted at the Agricultural Research Station, Bhavanisagar, under the Chairmanship of **Dr. K. S. Subramanian**, Director of Research, TNAU, Coimbatore, on **19.02.2019** to assess the progress of work done in various research projects and activities of the Station. The following Technical Directors and the Dean (Horticulture) and the scientists of ARS, Bhavanisagar attended the review meeting.

All the projects were reviewed and the remarks are given in the following table for necessary action by all scientists in ARS, Bhavanisagar.

Technical Directors

1. Dr. V. Geethalakshmi, Director (Crop Management)
2. Dr. K. Prabakar, Director (CPPS)
3. Dr. S. Paneerselvam, Director (WTC)
4. Dr. R. Santhi, Director (DNRM)
5. Dr. L. Pugalendhi, Dean (Hort.)
6. Dr. K. Sathyamoorthi, Prof. (Agron.), O/o The Directorate of Research

Scientists of ARS, Bhavanisagar

1. Dr. N. K. Prabhakaran, Prof. & Head
2. Dr. Sangeetha Panicker, Professor (Pl. Pathology)
3. Dr. D. Muthumanickam, Professor (SS&AC)
4. Dr. V. Manonmani, Professor (SS&T)
5. Dr. K. Malarkodi, Assistant Professor (SS&T)
6. Dr. K.M. Sellamuthu, Asst. Professor (SS&AC)
7. Dr. D. Malarvizhi, Asst. Professor (PBG)
8. Dr. B. Meenakumari, Asst. Professor (PBG)

9. Dr. A. Valliammai, Asst. Professor (SWC)
10. Dr. M. Rajavel, Asst. Professor (CRP)
11. Dr. N. Satheeshkumar, Asst. Professor (Agron.)
12. Dr. P. Hemalatha, Asst. Professor (Horti.)
13. Dr. R. Vigneshwari, Assistant Professor (SS&T)
14. Dr. Sheela Venugopal, Asst. Professor (Agrl. Ento.)

Research

- All the externally or internally funded research projects under various schemes DBT, AICRP, VCS, RFS, NADP, IAMWM and Others are to be numbered properly in accordance with the numbers assigned by the Office of the Directorate of Research, TNAU, Coimbatore. The detailed review report is attached.
- All project leaders should maintain field notebooks, basic records and project file for on-going and completed projects
- Submit completion reports in prescribed formats for those projects that were officially closed. In case the period is lapsed already, the projects required to be extended with specific reasons and closed with a stipulated time period (All Scientists).
- The completed projects must result in publications in peer reviewed national or international journals besides in regional language. As per the instructions of the Vice Chancellor, all the manuscripts that are to be submitted for publications should get number from the Director of Research Office. A set of already published ones (soft and hard copies) need to be given to the DR's office.
- The outcome of the completed projects should be presented in the upcoming crop scientist meet 2019.
- Projects that were found unproductive, inconsistent or irrelevant to the agro-climatic zones were suggested to be closed
- Each scientist should possess at least one research project relevant to the requirement of the agro-climatic zone
- Scientists were strongly suggested to get projects from externally funding agencies and advised to take advantage of **Grantsmanship Workshops** to be organized in the month of March 2019 by the Directorate of Research, TNAU, Coimbatore.

Seed Production

- Bhavanisagar being the major seed production hub, both breeders and seed scientists must bestow utmost care to produce and supply quality seeds. Proper rogueing and removal of off-types are to be done periodically to ensure maintenance of genetic purity.
- All records and periodical inspection reports are to be maintained and the same have to be monitored by the HOD.
- Seed Quality Lab carries a set of sophisticated equipments but not properly maintained and used. The pH and EC meters were kept unattended for a long time. Dr. V. Manonmani, Professor (SS&T) is requested set right the lab and action taken may be intimated to the undersigned.

Farms

- Ensure all the fields are properly utilized for conducting experiments or seed production. Ensure a cropping intensity of > 200.
- All the field experiments are to be properly labeled with field boards and labels
- Cropping programme and cropping calendars are to be maintained and get it approved periodically.
- In order to overcome the labor shortage, HOD is requested to send proposal for hiring contractual labourers and farm mechanization. It is intended to take up a joint Demo between TNAU and TAFE.
- A proposal may be sent for the construction of retention wall and raising of the pump shed in Pungar Block

Administration

- Office records are updated, well maintained and deserve a bountiful of appreciation
- Audit objections relating the pending credit bills with the State Government may be submitted to the Director of Research for onward transmission to the Vice Chancellor to derive solution to unresolved issues

Detailed Review Reports

URP / Externally Funded Projects / VCS / RFS / Core Project / Others

No.	Project Leader	Project No. & Title	Date of Start & Closure	Status	Director of Research / Technical Director
1.	**Dr. D. Malarvizhi** Asst. Prof. (PBG)	CPBG/BSR/PBG/MAZ/2017/001 Breeder seed production in Maize	Jun 2017 to May 2020	Male parental line UMI 1200 was sown on 31.12.2018 and female line on 08.01.2019. Crop is in vegetative phase	The project may be continued as per the schedule
	Dr. D. Malarvizhi Asst. Prof. (PBG)	CPBG/BSR/PBG/GGR/2016/001 Breeder seed production in green gram, blackgram varieties and evaluation of pre released cultures under multi locational testing	Jun 2016 to May 2021	The production programme was completed and target achieved.	The project may be continued as per the schedule
	Dr.D.Malarvizhi Asst. Prof. (PBG) - PI Dr.A.Thangahemavathy Asst. Prof. (PBG) Dept. of Pulses, TNAU, CBE - CO PI	DBT/CPBG/BSR/PBG/2017/R004 Introgression of Bruchid Resistant Gene(s) from *Vigna* genotypes into popular Mung bean (*Vigna radiata* L.) variety through Marker Assisted Backcross Breeding	19.6.2017 to 18.6.2020	Backcross population (BC1F1) raised was on 09.02.2018. Molecular work is in progress.	Study related to seed coat texture need to be carried out using advanced techniques like IR technology
	Dr. D. Malarvizhi, Asst. Prof. (PBG) Dr. R.Vigneshwari Asst. Prof. (SST)	AICRP/STR/BSR/SEP/002 Breeder seed component	Apr 1994 onwards	The production programme was taken up as per the communication given by the Director (CPBG), TNAU, Coimbatore.	The project may be continued as per the schedule

	Dr.D.Malarvizhi Asst.Prof. (PBG) Dr.B.Meenakumari Asst.Prof. (PBG)	RF/ARS/BSR/ 002 Breeder seed component	Apr 1994 onwards	The production programme was taken up as per the communication given by the Director (CPBG), TNAU, Coimbatore.	The project may be continued as per the schedule
2.	**Dr. B. Meena Kumari,** Asst. Prof. (PBG)	CPBG/BSR/PBG/GNT/ 2015/002 Evolving Spanish bunch groundnut (*Arachis 5hypogea*) genotypes with superior yield and evaluation of pre-release cultures of oilseed crops under MLT	Sep 2015 to Aug 2018	The culture BSG 0912 was released as groundnut var. BSR 2 in SVTRC during Jan 2019. The completion report was submitted	DNA Finger printing may be completed at the earliest and notification may be done. Samples must be sent to NPBGR. The variety may be promoted by giving a wide publicity through social networks and mass media.
	Dr. B. Meena Kumari, Asst. Prof. (PBG)	CPBG/BSR/PBG/GNT/2017/001 Breeder seed production in ruling varieties of groundnut in Tamil Nadu	Jul 2017 to Jun 2020	The production programme was taken up as per the communication given by the Director (CPBG),TNAU,Coimbatore	The project may be continued as per the schedule
	Dr. B. Meena Kumari, Asst. Prof. (PBG)	CPBG/BSR/PBG/SES/2017/ 001 Development of white seeded sesame genotypes suitable for western zone of Tamil Nadu	Jul 2017 to Jun 2020	Evaluation in station trial is in progress	The status regarding white seeded sesame may be reported. Artificial inoculation study may be conducted to assess the resistance potential of the crop. Fatty acids (Omega 3 & 4) and protein evaluation may be done
	Dr. B. Meena Kumari, Asst. Prof. (PBG)	CPBG/BSR/PBG/RIC/2016/001 Nucleus and Breeder seed production in popular rice varieties of Tamil Nadu	Jun 2016 to May 2021	The production programme was taken up as per the communication given by the Director (CPBG), TNAU, Coimbatore.	Care may be taken for maintaining the genetic purity. Record maintenance and digitalization may be done for all the breeder seed supply.

3.	**Dr. N. Satheeshkumar,** Asst. Prof. (Agron.) Dr. K.M.Sellamuthu, Asst. Prof. (SS&AC)	DCM / ADT/ AGR/ RIC / 2016/001 Comparative performance of different crop establishment methods for Rice – Rice – Blackgram cropping system	June 2016 to June 2019	Rice Var. Co50 was transplanted on 05.12.2018.	The water saving percentage may be quantified.
	Dr. N. Satheeshkumar, Asst. Prof. (Agron.) Dr. K.M.Sellamuthu, Asst. Prof. (SS&AC)	DCM/TNJ /AGR/2016 001 Oil seeds as a component in rice based cropping sequence in canal command area (Upland)	June 2016 to June 2019	Rice Var. Co50 was transplanted on 28.12.2018.	The data may be presented in sequence. The water saving percentage may be quantified
	Dr. N. Satheeshkumar, Asst. Prof. (Agron.)	AICRP/DCM/CBE/AGR/001 AICRP – Integrated Farming System on Farm Research Experiment I: On farm crop response to plant nutrients in rice-Gingelly cropping system and their interaction with human continuum	Apr 2017 to Mar 2020	Rice crop was harvested and yield has been recorded. Soil and plant sample preparation for analysis is under progress. Gingelly yet to be sown.	Specific task may be addressed in consultation with Director (Crop management) for the AICRP project. Additional treatments suitable for the region may also be included. Nutrient budgeting related projects may be proposed.
		Experiment II: Diversification of Existing Farming Systems under Marginal household conditions		Rice crop was harvested and yield has been recorded. Turmeric and tapioca yet to be harvested	The value of animal component to be taken up for working out economics
		Experiment III: On-farm evaluation of farming system modules for improving profitability and livelihood of small and marginal farmers		Rice crop was harvested and yield has been recorded. Turmeric and tapioca yet to be harvested. Cotton yet to be sown.	Success story has to be prepared and a video documentation has to be made
4.	**Dr.D. Muthumanickam** Professor (SS&AC)	NRM/PKM/SAC/001 Spatial variability analysis of	April 2016 to May 2019	The project work as per the mandate was completed and the completion report	To be completed. The results of the project may be presented in non-crop scientist meet. The soil

		available nutrient status in the soils of Western block of HC & RI, Periyakulam		has to be submitted	profile status of ARS, Bhavanisagar may be studied.
	Dr.D. Muthumanickam Professor (SS&AC)	**New project** Optimizing source and levels of Sulphur for enhancing rhizome yield and curcumin content of turmeric grown under Western zone of Tamil Nadu	June 2019 to July 2022	Project was submitted for approval. Number awaited	The project treatments may be revised and submitted for approval
5.	**Dr. K.M.Sellamuthu** Asst. Prof. (SS&AC)	**New Project** Effect of rice husk ash as a source of silica for rice based cropping systems of Tamil Nadu	April 2019 to March 2022	Project proposed	New number will be allotted after receipt of proposal with RPAC recommendation from the Director (NRM)
6.	**Dr. V. Manonmani** Professor (SS&T)	SEED/CBE/SST/GNT/2016/001 Study on seed priming treatments for improving seed vigour and yield in groundnut	June 2016 to May 2019	The project work as per the mandate was completed and the completion report has to be submitted	Project to be completed. Hydro priming for drought to be studied.
7.	**Dr.V.Manonmani** Professor (SS&T) Dr.K.Malarkodi Asst.Prof.(SS&T) Dr.R.Vigneshwari Asst.Prof.(SS&T)	RF/ARS/ BSR/ 001 Foundation and TFL seed component	Apr 2007 onwards	Seed production carried out as per the production programme communicated by the Director, Seed Centre, TNAU, Coimbatore	The project may be continued as per the schedule
8.	**Dr. K. Malarkodi** Asst. Prof. (SST)	SEED/BSR/SST/GGR/ 2017 /001 Study on impact of seed priming and seed coating techniques on resistance to water stress in greengram	June 2017 to May 2019	Two year trial with four seasons was completed. Storage study is in progress	The interaction study of seed priming and bruchid infestation may be taken up. The project may be completed. Externally funded projects may be proposed.

9.	**Dr.R.Vigneshwari,** Asst. Prof. (SST)	SEC/BSR/SST/RIC/2018/001 Evaluating the influence of seed priming on crop growth and yield of direct seeded rice	Dec 2018 to Nov 2020	Field trial has to be raised during June 2019	Midterm correction for treatments to be submitted through Director, Seeds Centre for approval
	Dr. R. Vigneshwari, Asst. Prof. (SS&T), Dr. Sheela Venugopal, Asst. Prof. (Agrl. Ento.)	SEED/BSR/SST/RIC/2017/001 Evaluating an integrated management approach against Angoumois grain moth (*Sitotroga cerealella*) infestation to improve rice seed storability	Dec 2016 to Dec 2018	One field experiment and storage study were completed. Sample was sent for toxicity analysis	Promote botanicals of TNAU formulations.
10.	**Dr. P. Hemalatha,** Asst. Prof. (Hort.)	HCRI/BSR/HOR/SPC/2015/003 Breeding of turmeric for high yield and quality	July 2015 to June 2018	The turmeric culture BS – 9 is under MLT II. The crop is under rhizome maturation phase	Large scale demonstration may be done before releasing the culture. Calulate curcumin yield and actual yield/ha. Rhizome harvester can be used and performance may be reported.
		GOI-DASD/HCRI/ PKM/SPC/2015/D001 MIDH-Seed & Planting material production, distribution and transfer of technology in spices	2018-19	The crop is under rhizome maturation phase to achieve the target of 33 tonnes seed rhizomes). FLD on organic farming of turmeric was taken up. Farmers training on 'Recent trends in turmeric cultivation' has been programmed on 26th February, 2019	The project may be continued as per the schedule
		RF/ARS/ BSR/ 003 Seed production in Horticultural crops.	Dec 2009 to till date	The seed rhizome of turmeric and soft wood grafts of mango and Amla are being produced and distributed	The project may be continued as per the schedule

10.	**Dr. A. Valliammai,** Asst. Prof. (SWCE)	AICRP/WTC/CBE/IWM/001 Optimization of depth of placement of lateral using HYDRUS for different soil types	Sep 2016 to Aug 2019	Two years experiments completed. In the current year simulation work has been taken up and optimization of lateral depths and wetting pattern has to done.	Wetness spread of the soil to be recorded
		AICRP/WTC/CBE/IWM/001 Application of Soil and Water Assessment Tool (SWAT) model for estimation of surface water resources and temporal water demand for sustainable water management in a selected watershed of Bhavani river basin	Sep 2018 to Aug 2019	Digitization of boundary map of the LBP basin completed Delineation of micro watersheds has been completed Preparation of thematic maps completed Hydrological parameters were simulated	The DCM may be consulted for modeling on climate study. An on-station trial at Thoppampalayam block of ARS, Bhavanisagar need to be taken up. Suggested to purchase soil moisture meter from ICAR-SBI, Coimbatore for study purpose
		AECRI/BSR/SWC/2017/001 Identification of Water Harvesting Structures for Groundwater Recharge Using Geo-Spatial Techniques	Nov 2017 to Oct 2018 (completed)	Runoff potential map was prepared for Bhavani watershed Runoff volume was estimated Various thematic layers were prepared and overlay analysis was done in GIS. The suitable location was identified using geo spatial techniques for constructing the rain water harvesting structures in the study area.	Completion report to be submitted with RPAC approval
11.	**Dr. Sangeetha Panicker** Professor (Plant Patho.)	**New Project** Effect of Silicon on the control of leaf spot, leaf blotch and rhizome	April 2019 to May 2022	Project submitted and presented in RPAC meeting. Comments were carried out and	New project number will be allotted after the receipt of the proposal with RPAC approval from Director (CPPS).

		rot of turmeric		resubmitted for approval	Takeup a trial at Thalavadi area under natural condition. Give a cost effective package from this project. The treatment with different dose of Potassium silicate and Silicic acid alone may be taken up for the study
12.	**Dr. Sheela Venugopal,** Asst. Prof. (Agrl. Ento)	CPPS/BSR/ENT/RIC/2016/001 Evaluation of eco-friendly methods against rice yellow stem borer (YSB).	Sep 2016 to Aug 2019	Second trial crop was transplanted on 10.02.2019.	The findings of this project may be shared with other entomologists of the University. Technology capsule for controlling rice pest may be submitted in CSM on rice. One page write up regarding the management practice of fall army worm may be submitted to Director (CPPS) and Director of Research.
13.	**Dr.M.Rajavel,** Asst.Prof. (CRP)	DCM/BSR/CRP/RIC/ 2015/001 Physiological studies in aerobic rice through drip fertigation system	Aug 2015 to Jul 2017	Project completed	Completion report to be submitted through Director, Crop Management with RPAC approval. New URP should be proposed. The web page of ARS,Bhavanisagar need to be updated.

VCS Schemes

No.	Project Leader	Scheme No. & Title	Date of Start & Closure	Status	Director of Research / Technical Director
1.	**Dr. K.M.Sellamuthu** Asst. Prof. (SS&AC)	V60ED Commercial production and distribution of vermicompost	Aug 2006 onwards	6.5 tonnes of vermicompost sold. 2 tonnes ready for sale	Central farm unit need to be visited with PUSM for training and future improvement. Product may be sold through Central farm,TNAU. Super impose other bio-inoculants and bring out enriched vermicompost product
2.	**Dr. R. Vigneshwari,** Asst. Prof. (SS&T) K.Malarkodi, Asst. Prof. (SS&T)	V60BI Production of foundation seeds of popular rice varieties through System of Rice Intensification.	Sep 2003 onwards	11 tonnes of seed sold. 16 tonnes of seed ready for sale	The project may be continued as per the schedule.
3.	**Dr. P. Hemalatha,** Asst. Prof. (Hort.)	V60 AT Clonal propagation of BSR 1 Amla (*Emblica officinal is*) for commercial outlet	Aug 2003 onwards	3000 soft wood grafts of mango and 2000 soft wood grafts of amla were produced and being supplied	The project may be merged with ICAR MSP(RF) horticulture scheme.
		V60 EB Commercial production and distribution of Banana suckers, fruits and leaves.	Sep 2006 onwards	10,000 suckers, 9.4 ton bunches and 1000 leaves were produced and supplied.	The project may be continued as per the schedule

4.	**Dr. Sangeetha Panicker** Professor (Plant Patho.)	V60 DM Mass Prqduction of *Trichoderma viride*, *Pseudomonas fluorescens* and *Pleurotus* spp.	Oct 2018 onwards	360 kg Trichoderma viride and 240 kg Pseudomonas sold. 300 kg and 100 kg respectively ready for sale	Consultation with Prof. & Head (Plant Pathology) may be done to assess the possibility of liquid formulation production
5.	**Dr. Sheela Venugopal** Asst. Prof. (Agrl. Ento)	V60EM Production and distribution of popular varieties/hybrids coconut seedlings	Aug 2006 onwards	1600 seedlings sold. Sand curing of nuts was completed and sown for next batch production.	More number of seedlings may be produced to meet the requirement of delta farmers
		V60IG Commercial production of *Beauveria* and *Metarhizium*	Oct 2018 onwards	Production to be initiated. Unit establishment was completed	The production need to be started at the earliest

NADP Scheme

No.	Project Leader	Scheme No. & Title	Date of Start & Closure	Status	Director of Research / Technical Director
1.	**Dr. V.Manonmani,** Professor (SST) **Dr. K.Malarkodi,** Asst. Prof. (SST) **Dr. R.Vigneshwari,** Asst. Prof. (SS&T)	M-NADP-28 Farmer's participatory seed production and popularization of MGR 100 rice in Tamil Nadu.	2018-2019	FLD (10 Nos.) was completed. Field day was conducted. Seed procurement	Status of genetic purity of paddy variety CO 52 may be addressed.

IAMWARM II

No.	Project Leader	Scheme No. & Title	Date of Start & Closure	Status	Director of Research / Technical Director
1.	**M. Rajavel,** Asst. Prof.(CRP)	TNIAMP – Phase I Tamil Nadu Irrigated Agriculture Modernization Project	17.11.2017 to 31.03.2023	Interventions *viz.*, GM – SRI, SSI, PF – Vegetables target has been completed.	The project may be continued as per the schedule

Student Research

No.	Student Name	Thesis title	Period	Status	Director of Research / Technical Director
1.	**M. Rajasekar** III Ph.D (Agronomy) **Chairman:** Dr. N. K. Prabhakaran Professor and Head, ARS, Bhavanisagar	Moisture Stress Management in Different Irrigation Regimes of Maize	Aug 2017 to June 2019	First year experiments have completed (Two seasons) and II year experiments are in progress.	Report regarding PPFM spray in maize may be submitted to CSM on millets

General recommendations

Director (CPPS)

- Scientists are instructed to propose an externally funded project

Director (NRM)

- STCR based fertilizer prescription for ARS, Bhavanisagar soils may be prepared with a cc to NRM.
- Soil database for ARS, Bhavanisagar need to be updated.

Director (DCM)

- Externally funded project with multidisciplinary aspects may be proposed

Director (WTC)

- Existing TNAMP basins can be used as a launching pad for evaluating and popularizing the TNAU technologies and varieties

Director of Research

- Emphasis may be given to product/ technology oriented research projects supported by externally funding

21/2/19
Director (DCM)

21/2/19
Director (DNRM)

21/2/19
Director (WTC)

21/2/19
Director (CPPS)

21/2/19
Dean (Hort), CBE

21/2/19
Director of Research

To
All the University Officers
All Professors and Heads, TNAU, Coimbatore
Prof. & Heads of all Research Stations/Programme Coordinators, KVKs

Copy to TPO to Vice-Chancellor, TNAU, Coimbatore