

**PROCEEDINGS OF THE 34th SCIENTISTS' MEET ON PULSES HELD ON 06.05.2016
AT UNIVERSITY SEMINAR HALL, TNAU, COIMBATORE**

The 34th Scientists' Meet on Pulses was held on 05.05.2016 and 06.05.2016 at TNAU, Coimbatore. The Vice-Chancellor, Director of Research, Technical Directors, Deans and Special Officers, Scientists from different research stations attended the Crop Scientist Meet (Pulses). The review of university research projects was taken up by the Technical Directors at respective directorates on 05.05.2016.

The plenary session was held on 06.05.2016. The meeting began with a prelude by Dr. M. Maheswaran, Director of Research. Action taken report on the recommendations made during previous crop scientists' meet and progress report of various projects were presented by the lead scientists of the respective disciplines.

Dr. R.P. Gnanamalar, Professor and Head, National Pulses Research Centre, Vamban made a presentation on the action taken report of 33rd Pulses Scientist Meet and highlighted the varieties released during 2016, pre-release cultures and the salient findings from research sub-projects including the performance of MLT and ART cultures.

Dr. G. Prabukumar, Assistant Professor (Agronomy) as lead scientist (Agronomy) made a presentation on the action taken report and salient findings pertaining to Crop Management.

Later, Dr. Zadda Kavitha, Assistant Professor (Agricultural Entomology) as lead scientist (Agricultural Entomology) made a presentation on the action taken report and salient findings pertaining to Agricultural Entomology.

Then, Dr. V.K. Satya, Assistant Professor (Plant Pathology) as lead scientist (Plant Pathology) made a presentation on the action taken report and salient findings with respect to Plant Pathology.

Action plans for the next three years for crop improvement, crop management and crop protection were presented by the Director (CPBG), Director (DCM) and Director (CPPS) respectively.

Proceedings of the 34th Pulses Scientists' Meet are in the following order.

1. Staff pattern
2. Remarks on the individual University Research projects
3. Decision made on the entries for Variety Release/ART/MLT from breeders
4. Decision made on OFT evaluation for technologies from Crop Management and Crop protection Scientists
5. Remarks made by the Vice-Chancellor
6. Action Plan for 2016-2019: Crop Improvement, Crop Management and Crop Protection

1. Staff Pattern

Station	Designation	Discipline										
		PBG	AGR	AGM	SAC	SST	CRP	ENT	PAT	NEM	Biotech	Total
Vamban	Professor	1	-	-	-	-	-	1	-	-	-	2
	Asst. Professor	2	1	1	-	1	1	2	1	-	-	9
Coimbatore	Professor	1	-	2	1	-	2	2	-	-	1	9
	Asst. Professor	4	3	1	1	1	-	1+1	2	1	2	17
Madurai	Professor	1	3	1	-	-	-	2	-	-	-	7
	Asst. Professor	1	1	-	-	-	-	1	-	-	-	3
Trichy	Professor	1	-	-	-	-	-	-	-	-	-	1
	Asst. Professor	1	3	-	-	1	1	1	-	-	-	7
Killikulam	Professor	-	-	-	-	-	1	1	-	-	-	2
	Asst. Professor	1	1	1	-	-	1	-	-	-	-	4
Paiyur	Professor	-	-	-	-	1	-	1	-	-	-	2
	Asst. Professor	1	1	-	1	-	-	1	-	-	-	4
Virinjipuram	Professor	1	-	-	-	-	-	-	-	-	-	1
	Asst. Professor	1	-	-	-	-	-	-	-	-	-	1
Aduthurai	Asst. Professor	1+1	-	-	-	-	-	-	-	-	-	2
Kovilpatti	Asst. Professor	-	1	-	-	-	-	-	-	-	-	1
Thanjavur	Asst. Professor	2	-	-	-	-	-	-	-	-	-	2
Pattukottai	Professor	2	-	-	-	-	-	-	-	-	-	2
	Asst. Professor	1	-	-	-	-	-	-	-	-	-	1
Palur	Asst. Professor	1	-	-	-	-	-	-	-	-	-	1
Tirur	Asst. Professor	1	-	-	-	-	-	-	-	-	-	1
Aruppukottai	Professor	-	-	-	1	-	-	-	-	-	-	1
	Asst. Professor	-	-	-	1	-	-	-	-	-	-	1
Chettinad	Asst. Professor	-	-	-	1	-	-	-	-	-	-	1
Bhavanisagar	Asst. Professor	-	-	-	-	1	-	-	-	-	-	1
Total		25	14	6	6	5	6	14	3	1	3	83

Numbers in bold are under AICRP – Pulses (24 scientists); 59 scientists under main scheme.

2. Remarks on Ongoing University Research Projects

Plant Breeding and Genetics

S. No.	Project Number	Remarks
Redgram		
1	CPBG/VMB/PBG/RGR/2012/002 Evolution of high yielding redgram genotype with pest and disease resistance Dr. S. Lakshmi Narayanan April 2012 – March 2017	The project number should be CPBG/VMB/PBG/RGR/2012/001 Whether the materials are from AICRP or TNAU collections? How many accessions are being maintained?
2	CPBG/VMB/PBG/RGR/2015/002 Collection, maintenance and evaluation of germplasm in redgram Dr. S. Lakshmi Narayanan Oct 2015 to Sep 2020	Under breeding materials developed, it is mentioned F ₁ s from seven cross combinations and true F ₁ s were identified and bulked. What is the meaning? Same six families were selected from three F ₂ cross combinations and forwarded. Whether is F ₂ generation of three crosses? How the families were selected in F ₂ generation? Of the 12 cross combinations made under this project, five were shown in the AICRP's national crossing programme also.
3	CPBG/CBE/PBG/RGR/2014/001 Evolution of high yielding medium duration redgram varieties through recombination breeding Dr. A. Thanga Hemavathy Dr. J. R. Kannan Babu October 2014 to September 2017	In all most all the crosses made CO(Rg)7 was used as female parent. Whether the germplasm accessions are from TNAU or AICRP?
4	CPBG/CBE/PBG/RGR/2014/002 Evolution of high yielding short duration redgram varieties through recombination breeding Dr. J. R. Kannan Babu Dr. A. Thanga Hemavathy October 2014 to September 2017	In almost all the crosses, CO6 was used as a female parent. Is there any reason for running two different projects, one for medium duration and another for short duration with same principal investigators?
5	CPBG/CBE/PBG/RGR/2014/003 Development of high yielding short and medium duration redgram hybrids using CGMS system	Nothing technical is made available from the report. What is CO(Rg)57? Why this kind of nomenclature?

	Dr. A. Thanga Hemavathy Dr. J. R. Kannan Bapu October 2014 to September 2017	
6	CPBG/VIJ/PBG/RGR/2013/001 Evaluation of dual purpose redgram and mochai genotypes suitable for rainfed tract of Tamil Nadu Dr. M. Pandiyan January 2013 to December 2015	CPBG/VIJ/PBG/RGR/2013/001 Why two different projects? Both evolution and evaluation can be together. Mochai materials available under this project may be transferred to RRS, Paiyur. Project period is over. Completion report should be sent.
7	CPBG/VIJ/PBG/GGR/2014/New Development of high yielding short duration redgram suitable for rainfed tract of Tamil Nadu. Dr. A. Gopikrishnan December 2014 to November 2017	Dr. A. Gopikrishnan can remain as the principal investigator. Survived crosses of F ₁ s or survived F ₁ s of crosses?
Blackgram		
8	CPBG/VMB/PBG/BGR/2011/001 Evaluation, evolution and maintenance of germplasm of blackgram genotypes Dr. R. P. Gnanamalar	The project is to concentrate on the evaluation of ermplasm or evolution of superior blackgram genotypes? A total of 546 accessions were evaluated for yield parameters? Of the 546 how many are our own collections? Whether the passport data for all the collections are available? F ₂ generations of 19 cross combinations were evaluated? How many F ₂ plants per cross? How 31 single plants were selected?
9	CPBG/CBE/PBG/BGR/2011/001 Evolution of high yielding blackgram varieties with resistance to MYMV disease Dr. D. Kumaresan	A total of 546 and 380 accessions were maintained at Coimbatore and Vamban respectively. Was there any comparison made for identifying the duplicated at least based on the passport data? 480 F ₂ individuals are from how many cross combinations?
10	CPBG/MDU/PBG/BGR/2015/002 Development of high yielding Yellow Mosaic Virus disease resistant variety in blackgram (<i>Vigna mungo</i> (L.). Hepper Dr. E. Murugan	How many F ₂ plants per cross? How the selection was made in across the segregants for yield and yellow mosaic resistance simultaneously that too in F ₂ generation?
11	CPBG/VIJ/PBG/BGR/2013/001 Evolution of Yellow Mosaic Virus resistant blackgram variety and identification of blackgram genotype with enhanced iron and zinc.	How the 22 lines were developed. The details of the pedigree may be furnished. The details of selection made for YMV resistance and iron and zinc fortification may be elaborated. The pedigree details

	Dr. M. Pandiyan	the of the advanced lines mentioned viz. VMBG03, VMBG05, VMBG 07, VMBG 08 and VMBG 18 need to be furnished. There is a list of materials mentioned. The background details of those materials are not furnished. The project was over by December 2015.
12	CPBG/ADT/PBG/BGR/2013/001 Development of blackgram cultures suitable for rice fallow conditions of Cauvery Delta Zone Dr. K. Iyyanar Dr. P. Shanthi	The project is with various evaluation trials. New crosses were effected only in 2015-16. Eighty progenies were forwarded to F ₃ generations. The 80 progenies were from F ₂ generations of how many cross combinations?
13	CPBG/TRY/PBG/BGR/2013/001 Development of early maturing high yielding Blackgram (<i>Vigna mungo</i> L.) for Rice fallow conditions and sodicity through gamma irradiation Dr. S. Geetha	The project has only one evaluation trial and the materials mentioned as mutants were evaluated how many times. Names of the mutants are with TR14 but the sourced are different. How these mutants were derived?
14	CPBG/TNJ/PBG/BGR/2013/001 Development of blackgram cultures suitable for rice fallow condition of Cauvery Delta Zone Dr. S. Santha	The work done indicates only the evaluation components. A set of mutants are being used in the project. The objectives of the study do not match with the work carried out. Fresh crosses were also made and the F ₂ s were bulked. From F ₂ s 27 single plants were selected. Further, there are M ₂ population of VBN4 and TMV1. How these mutant populations are exploited?
15	CPBG/KKM/PBG/BGR/2013/001 Development of high yielding blackgram variety suitable for irrigated and rice fallows of southern districts of Tamil Nadu Dr. D. Shoba	There is no mention about the materials sown of the cross combinations. How many F ₁ plants are available for the crosses selected? Why not specific crosses could have been attempted based on the objectives?
16	CPBG/VMB/PBG/BSP/2015/002 Maintenance breeding and breeder seed production in greengram, blackgram, redgram, cowpea and groundnut varieties Dr. A. Mahalingam	Project numbering should be CPBG/VMB/PBG/BSP/2013/001
17	TRRI/ADT/PBG/13/006 Maintenance and production of	Project numbering should be CPBG/ADT/PBG/BSP/2013/001

	nucleus seeds in blackgram and greengram varieties Dr. K. Iyanar	
18	TRRI/PKT/PBG/13/001 Nucleus and Breeder Seed Production in Pulses Dr. A. Bharathi	Project numbering should be CPBG/PKT/PBG/BSP/2013/001
19	TRRI/PLR/SST/12/001 Breeder seed production in Blackgram Dr. K. Sakthivel	Project numbering should be CPBG/PLR/PBG/BSP/2013/001
20	CPBG/TNJ/PBG/BSP/2013/001 Breeder seed Production in paddy and pulses Dr. S. Santha	
Greengram		
21	CPBG/VMB/PBG/GGR/2011/001 Evolution and maintenance of germplasm of greengram genotypes Dr. A. Mahalingam	Of the 54 cross combinations how many were identified as true F ₁ s? On what basis F ₁ s resistant to MYMV were selected? How four bulk populations were derived from F ₂ s of 18 cross combinations? What is the necessity for making crosses separately during <i>kharif</i> and <i>rabi</i> ? How the selections for specific traits can be exercised on these segregating materials?
22	CPBG/CBE/PBG/GGR/2011/001 Evolution of high yielding greengram varieties with synchronized maturity and resistance to MYMV disease Dr. D. Kumaresan	The parents involved in the synthesis of F ₁ s were not at all mentioned not only under this project and also in the above project. Why the crosses are made without right combination of parents?
23	CPBG/VIJ/PBG/GGR/2013/001 Evolution and evaluation of greengram genotypes for developing Mungbean Yellow Mosaic Virus resistance Dr. M. Pandiyan	This project deals with both evolution and evaluation of YMV resistant materials. Under the progress made, it is mentioned 215 lines were developed from VMGG012-002 and VGGru1 is registered in ICAR-NBPGR Gene Bank as IC589144. The developed 215 lines belong to which generation? What is the basis for using five lines of these 215 for further crossing? There are some 17 items listed with specific number of lines. There is no mention about the generations? In some cross combinations are mentioned. In some traits are specified. The project

		needs clear-cut work plan.
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24	CPBG/TRY/PBG/GGR/2013/001 Introgression of MYMV resistance genes from wild <i>Vigna</i> species to cultivated mungbean (<i>Vigna radiata</i> (L.) Wilczek) Dr. S. Chitra	The project is aiming for developing the mapping population for tagging genes for YMV resistance. The progress is not substantial.
25	CPBG/TKM/PBG/GGR/2014/002 Evolution of high yielding greengram varieties with tolerance to sodic soils Dr. T.Kalaimagal	The project work is with just evaluation and do not have any substantial progress.
26	CPBG/TKM/PBG/GGR/2010/001 Evolving early maturing, high yielding green gram variety with resistance to Yellow Mosaic Virus Dr. A. Sheeba	This is yet another project for evolving YMV resistant greengram genotypes. Selected materials of segregating generations at different levels were evaluated in two different seasons for various quantitative traits and YMV resistance. Whether the materials are one and the same or different? What is the need for making these many crosses?
27	CPBG/ADT/PBG/GGR/2013/001 Evolving high yielding, short duration greengram (<i>Vigna radiata</i> (L.) Wilezek) varieties suitable for rice fallow/summer irrigated cultivation in Cauvery Delta Zone of Tamil Nadu Dr. K. Iyanar	Single plants were selected for four different cross combinations. On what basis these plants were selected from how many F ₃ families of each cross?
Cowpea		
28	CPBG/VMB/PBG/COP/2010/001 Collection, maintenance and evaluation of cowpea germplasm and evolution of high yielding cowpea genotypes Dr. R. P. Gnanamalar	The major objective of the project is collection and evaluation cowpea germplasm. Other component is conducting evaluation trials at different stages. There is mention about making seven new crosses and evaluating F ₁ s.
29	CPBG/MDU/PBG/COP/2015/001 Development of short duration, determinate cowpea (<i>Vigna unguiculata</i> L.) variety suitable for southern districts of Tamil Nadu Dr. K. Thangaraj	The project is just started. It is mentioned F ₁ seeds of 11 crosses were received from RRS, Aruppukottai but no project on cowpea is in the list.
Soybean		
30	CPBG/CBE/PBG/SYB/2011/001 Maintenance and evaluation of	A total of 400 accessions are being evaluated. The accessions may be

	germplasm in soybean. Dr. R. Sudhagar	characterized in batches with all relevant information and catalogued with passport data.
31	CPBG/CBE/PBG/SYB/2011/002 Evolution of high yielding varieties of soybean suitable for irrigated condition Dr. R. Sudhagar	The project report has only the evaluation component. In what way this project is different from AICRP on soybean?
Chickpea		
32	CPBG/CBE/PBG/CHP/2015/New Evolution and evaluation of high yielding chickpea (<i>Cicer arietinum</i> L.) Varieties for biotic and abiotic stresses for Tamil Nadu zone. Dr. P. Anantharaju	A set of chickpea germplasm received from ICRISAT was evaluated. Selections were made from segregating materials of 11 cross combinations. The segregating materials belong to which generation?
Horsegram		
33	CPBG/PAI/PBG/HGR/2012/001 Evolution of high yielding horsegram genotypes suited to the rainfed areas of Tamil Nadu Dr. P. Suthamathi	RRS, Paiyur is the only centre maintaining the project on horsegram. The project work involves germplasm maintenance and evaluation. Local collections have to be evaluated with improved germplasm if available.
Mochai		
34	CPBG/PAI/PBG/MOC/2014/New Evolution of short duration high yielding vegetable pea types of mochai Dr. P. Suthamathi	Materials available from Virnjipuram should be made available to this centre for further evaluation.

Biotechnology

S. No.	Project Number	Remarks
1	CPMB&B-PMB-13-001 Marker assisted selection for <i>Phytophthora</i> and powdery mildew resistance and effective nodulation in soybean (<i>Glycine max</i> L. Merr.) Dr. J. Ramalingam Dr. R. Sudhagar	Project numbering should be CPMB/CBE/PBT/SOY/2013/001 The project is in the completion stage. Is there any externally funded scheme on this crop with same kind of approach? Phenotypic screening is done under controlled condition or field condition?
2	CPMB/CBE/PBT/BGR/2015/001 Identification of MYMV resistant donors in black gram through agro-inoculation and validation of linked marker(s) Dr. M. Sudha	The project is just started. Agroinfection method has to be standardized for screening the germplasm. Germplasm to be screened should be from different sources. What are the markers already

		identified for MYMV resistance in blackgram?
3	CPMB/KKM/BIC/2014/001 Biochemical impact of exogenous application of osmoprotectants in amelioration of water stress in blackgram (<i>Vigna mungo</i> .L) Dr. A. Kavitha Pushpam Dr. R. Amutha	Project numbering should be CPMB/KKM/BIC/BGR/2014/001 The objective of the project is to assess the biochemical impact of osmoprotectants. The experiment conducted does not meet the objectives of the study.

Agronomy

S. No.	Project Number	Remarks
Redgram		
1	DRES/PAI/AGR/013/002 Effect of foliar application of different sources of phosphorus on yield of transplanted redgram (<i>Cajanuscajan</i>) under irrigated conditions Dr. C. Sivakumar	Project numbering should be DCM/PAI/AGR/RGR/2013/001 The foliar spray of DAP and Pulse wonder are recommended for pulses as default. However, MAP and 19:19:19 are recommended for redgram. However, the conducted experiment does not establish the supremacy of MAP over other inputs with clear-cut scientific basis. The cost of MAP is to be considered. Fixing treatments to be decided based on the nitrogen and phosphate content of MAP and DAP.
Blackgram		
2	CAEK/KUM/AGR/14/004 Effect of plant density and method of irrigation on pulse (blackgram) productivity in CDZ Dr. S. Vallal Kannan	Project numbering should be DCM/KUM/AGR/RGR/2014/001 The experiment does not have proper treatments for plant density. In the report, it is mentioned that the seed rates were calibrated adopted. How the seed rate was calibrated for broadcasting?
3	ACMD-MDU-AGR-13-003 Response of rice fallow blackgram to various crop geometry under manual and machine sowing Dr. A. Veeramani	Project numbering should be DCM/MDU/AGR/BGR/2013/001 Motorized seed drill sowing was identified as the best treatment based on 1) increased germination, plant population, number of pods and number of seeds. Whatever may the outcome the

		moisture level at the time sowing is not assessed for any of the treatments. This is not mentioned anywhere in the report.
4	DCM/MDU/AGR/PUL/14/001 Engineering suitable crop geometry to enhance productivity of pulse under System of Pulse Intensification (SPI) Dr. T. Ragavan	Project numbering should be DCM/MDU/AGR/BGR/2014/002 The results obtained were interpreted based on the plant population maintained for each treatment. While engineering the crop geometry overall population per unit area should be considered as the prime criterion.
Greengram		
5	DCM/MDU/AGR/PUL/14/002 Integrated weed management in greengram under System of Pulse Intensification (SPI) Dr. G. Srinivasan	Project numbering should be DCM/MDU/AGR/GGR/2014/002 The highest grain yield of 907 kg ha ⁻¹ was recorded with the spacing of 30x10 cm + PE pendimethalin @ 1.0 kg a.i. ha ⁻¹ (3 DAS) + One HW (25 DAS) (T9) with the B:C ratio of 2.65. This is treatment used as a control for other treatments. What is the logic behind the conduct of the experiment with different treatments for two years?
6	ACMD/MDU/AGR/14/004 Optimizing manurial requirement of greengram under System of Pulse Intensification (SPI) Dr. S. Anitta Fanish	Project numbering should be DCM/MDU/AGR/GGR/2014/004 Across the treatment spacing was the changing component (25x25cm and 30x30cm). The treatments involved do not reflect any logic in deciding the manorial requirement. Plant population per unit area should be considered as the prime criterion in while analyzing the data generated.
7	ACTR/TRY/AGR/15/001 Study of biology, physiology and management of <i>Trianthema portulacastrum</i> in garden land ecosystem Dr. T. Ramesh	Project numbering should be DCM/TRY/AGR/GGR/2015/001 <i>Trianthema</i> seed bank assessment by sieving method revealed that as the depth of soil increased, <i>Trianthema</i> seed numbers reduced drastically. This is the normal thing expected. What is biology and physiology behind this study? Negative correlation was noticed between <i>Trianthema</i> numbers/m ² and

		grain yield of greengram. What is management secret behind this outcome.
8	ACTR/TRY/AGR/15/002 Studies on the performance of varieties and seed rate of greengram under rice fallow condition in sodic soil Dr. S. Rathika	Project numbering should be DCM/TRY/AGR/GGR/2015/002 The yield potential of different green gram varieties was assessed using different seed rate. What is the method of sowing adopted? How the seed rate affected the yield of each variety?
9	DRES/KPT/AGR/014/001 Time of sowing and weed management for rainfed greengram Dr. S. Subbulakshmi	Project numbering should be DCM/KPT/AGR/GGR/2014/001 What is the recommendation of the experiment?
10	DCM/KKM/AGR/RIC/2014/005 Effect of foliar nutrition in rice fallow greengram in Tamiraparani delta region Dr. S. Manoharan	Project numbering should be DCM/KPT/AGR/GGR/2014/001 The experiment is in progress. Considering cost MAP logic behind the treatments may be analyzed. Fixing treatments to be decided based on the nitrogen and phosphate content of MAP and DAP.

Soil Science and Agricultural Chemistry

S. No	Project Number	Remarks
Redgram		
1	NRM/MDU/SAC/RGR/2014/001 Assessment of phosphorus utilization and response of redgram cultivars to P in alkaline calcareous soils of Madurai district. Dr. S.Thiyageshwari	The main objective to assess the P utilization and response by different varieties of redgram. The P utilization and response were assessed based plant parameters and yield. Plant sample analysis could have been done to correlate the responses of varieties.
Blackgram		
2	NRM/CTN/SAC/BGR/2015/001 Effect of biochar and Phosphobacteria on carbon build-up, phosphorous availability and blackgram yield in rainfed Alfisol Dr. P. Kannan	Biochar-C is largely unavailable to soil microbes but changes in soil physicochemical properties due to the application of biochar shift the soil microbial community However, the quantity to be applied (5 t/ha) seems to be very high. Changes in soil microbial community may be observed with associated biochemical parameters.
3	DRES/APK/SAC/013/003 Evaluation of molybdenum nutrition to	Completion report may be submitted

	blackgram under rainfed conditions Dr. B. Bhakiyathu Saliha	
Horsegram		
4	NRM/PAI/SAC/2012/001 Effect of continuous addition of organic, inorganic and combination of nutrients on soil fertility and productivity under samai-horsegram cropping system Dr. M. Vijayakumar	Project numbering should be NRM/PAI/SAC/SMM/2015/001 What are the differences in objectives of this project and the next project which is on permanent manorial experiment with samai-horsegram cropping sequence? Both the projects can be combined into a single project.
5	NRM/PAI/SAC/SMM/015/001 Permanent Manorial Experiment (PME) on samai-horsegram cropping sequence in red sandy loam soil of Krishnagiri under rainfed condition Dr. M. Vijayakumar	

Crop Physiology

S. No	Project Number	Remarks
Blackgram		
1	DCM/VBN/CRP/BGR/2015/001 Impact of high temperature and moisture stress on photosynthesis, flowering and yield of blackgram genotypes Dr. V. Babu Rajendra Prasad	How the individual influence high temperature and moisture stress on parameters were established? Was there any relationship between the parameters observed, Flower drop could have been observed. No where the temperature regime maintained is mentioned.
2	ACTR/TRY/CRP/13/001 Study on impact of growth regulating substances in improving crop establishment and harvest index in blackgram and greengram under sodicity Dr. S. Nithila	Project numbering should be DCM/TRY/SAC/BGR/2013/001 What are the actual ingredients in cowpea sprout extract panchagavya responsible for regulating the growth?

Agricultural Microbiology

S. No	Project Number	Remarks
Redgram		
1	NRM/PAI/AGM/RGR/2015/001 Studies on the effect of mycorrhizal inoculation on redgram in the North western zone of Tamil Nadu Dr. R. Thamizh Vendan	The project is kept under abeyance since the project leader has been transferred.
2	New Arbuscular Mycorrhizal mediated nodulation and nitrogen fixation in redgram	Project Number is not obtained. The project is kept under abeyance since the project leader has been transferred.

	Dr. M. Gnanachitra	
Blackgram		
3	NRM/CBE/AGM/15/001 Standardization of application of Arbuscular Mycorrhizal Inoculum developed through root organ culture in direct sown crops Dr. K. Kumutha	Project number should be NRM/CBE/AGM/BGR/2015/001 The project is kept under abeyance since the project leader has been transferred.
4	NRM/CBE/AGM/15/002 Enhancing root nodulation in blackgram grown in acid soils using <i>Rhizobium</i> mutants and helper bacterium <i>Exiguobacterium</i> sp. Dr.R. Sridar Dr. M. Gnanachitra	Project number should be NRM/CBE/AGM/BGR/2015/002
5	ACMD-MDU-AGM-14-007 Studies on the effect of <i>Rhizobium</i> strains for Pulse (blackgram and greengram) growing areas of Madurai district Dr. M. Sundar	Project number should be NRM/MDU/AGM/BGR/2015/007 In what way the above two projects are differing in their objectives?
Greengram		
6	NRM/KKM/AGM/GGR/2015/001 Evaluating the efficiency of AM fungal inocula in combination with <i>Rhizobium</i> on the growth of greengram Dr. L. Srimathi Priya	The project is for two years. Why not the already available collections of both AMF and <i>Rhizobium</i> can be tried considering the time frame of the project?
Chickpea		
7	NRM/CBE/AGM/15/003 Screening of symbiotic efficiency of <i>Rhizobium</i> in Chickpea Dr. J. Ejilane	Project number should be NRM/CBE/AGM/CHP/2015/003 Progress is not substantial

Seed Science and Technology

S. No	Project Number	Remarks
Redgram		
1	SEED/VMB/SST/RGR/2013/001 Response of pigeonpea VBN 3 to season and plant bioregulators intervention in relation to seed physiology and yield potential Dr. C. Vanitha	Of the six different treatments, ZnSO ₄ and DAP are inorganic compounds. DAP was given as foliar spray. ZnSO ₄ was used for seed hardening (Table 1). Title of Table 1 and treatment details are not matching. In Table 2 there are eight treatments whereas in Table 1 there are only seven treatments. What are the right parameters for assessing the physiological maturity of seeds.
Blackgram		
2	SEED/VMB/SST/BGR/2014/001 Development of organic seed invigouration technique for enhancing various vigour status of blackgram seeds. Dr. C. Vanitha	What are the active ingredients of materials used for organic seed invigouration and what is the scientific basis for using these materials?
Greengram		
3	SEED/BSR/SST/GGR/2015/001 Assessment of seed vigour for crop productivity of fresh, validated and revalidated seeds of greengram Dr. G. Sasthri	Activated clay is an absorbent. Imidacloprid and Chlorpyrifos are insecticides and both neurotoxic to insects. Carbendazim is fungicide. What is the logic behind the treatments? There is 5.3% infestation (P4) due to insects. In that case what is sequence of observations? Whether the germination (%) was taken before infestation or after infestation?
4	SEED/TRY/SST/GGR/2013/001 Development of Pongamia oil derived phytoformulation against pulses seed storage pathogen and pulse beetle. Dr. T.Eevera Dr. P.Yasodha	What is the constitution of Pongamia oil derived formulation? What are the other treatments? Reporting of the experiment conducted is not complete.
Horsegram		
5	SEED/PAI/SST/HGR/2014/001 Standardization of seed priming to improve germination and productivity in horse gram under rainfed conditions Dr. P. Srimathi	ZnSO ₄ is usually used for seed hardening. PPFM is phyllosphere bacteria and <i>Pseudomonas fluorescens</i> is biocontrol agent. Why all these were identified for priming? How the results obtained will be interpreted with scientific basis?

Agricultural Entomology

S. No	Project Number	Remarks
Redgram		
1	CPPS/VMB/ENT/RGR/2013/002 Evaluation of pigeonpea genotypes for resistance or tolerance to pod damaging insects. Dr. Zadda Kavitha	Conceptually in what this project is different from the component of AICRP activity in redgram?
2	CPPS/VMB/ENT/RGR/2014/003 Management of pod insect pests of pigeon pea with biorational approach. Dr. S.Pasupathy Dr. T. Abdul Razak	Biorational control of pests means harmonizing biological and chemical control. In the report, only the results are shown. The impact of birational control measures on natural enemies is not furnished.
3	ACMD-MDU-AEN-14-004 Diversity, seasonal abundance and development of IPM module for major pests of transplanted pigeonpea under precision farming system Dr. M. Shanthy	Project number should be CPPS/MDU/AEN/RGR/2014/004 Will there be any difference in pest incidences between transplanted and normal redgram cultivation? Whether redgram transplantation is followed in Madurai District? Is there any outcome similar to the outcome of experiment conducted at NPRC, Vamban
Blackgram		
4	CPPS/VMB/ENT/BGR/2014/001 Efficacy of bioinoculants in combination with insecticides against insect pests of blackgram, <i>Vigna mungo</i> (L.) Hepper. Dr. S.Pasupathy Dr. T. Abdul Razak	Profenophos is identified as toxic insecticides to <i>Beauveria bassiana</i> and compatible with <i>Pseudomonas fluorescense</i> . But the results indicated almost same impact by both combinations. Whether the compatibility studies between insecticides and bioinoculants were carried out before starting the experiments?
5	ACMD-AEN-13-003 Bioecology and management of sucking pests, leaf feeders and pod borer complex in black gram. K. Premalatha	Project number should be CPPS/MDU/AEN/BGR/2013/003 Bioecology of all the pests could have been studied under field condition. The results were available only for the podborer. What is the logic in having three treatments? What were the results obtained from previous experiments?
6	ACMD-MDU-AEN-14-005 Eco-friendly management of pulse beetle, <i>Callosobruchus</i> spp. in blackgram under field and storage conditions. Dr. J. Jayaraj	Project number should be CPPS/MDU/AEN/BGR/2014/005 What is reproducibility of the results obtained? How many blackgram accessions were screened for their level o resistance to <i>Callosobruchus</i> ?
7	CPPS/KKM/ENT/BGR/2014/001 Population dynamics of insect pests of	The reporting does not reflect any information on the population dynamics of

	blackgram, <i>Vigna mungo</i> (L.) Hepper and seed treatment for their management. Dr. N. Murugesan	insect pests of blackgram.
8	CPPS CBE AEN 13 036 Development of an eco-friendly plant origin seed treatment product for the management of pulse beetle in storage and pests of vegetables nursery Dr. S. Jeyarajan Nelson	Project number should be CPPS/CBE/AEN/BGR/2013/036 The outcome of the results of bioproduct on the nagament of
9	CPPS/VMB/ENT/COP/2013/001 Screening of cowpea germplasm for the sources of resistance or tolerance to aphid, aphid borne mosaic virus and pod borers. Dr. Zadda Kavitha	How the percentage of damages for different pests was assessed across five different accessions?
Mochai		
10	CPPS/PAI/ENT/FBN/2013/001 Studies on the susceptibility of mochai genotypes (<i>Lablab purpureus</i> var <i>lignosus</i> against pod borer and bruchids. Dr. S. Mohamed Jalaluddin	Title of project could have been formed as screening mochai genotypes for pod borer and bruchid resistance. What is necessity for bring in the data for pollinators and their role in seed set?
11	CPPS/PAI/ENT/FBN/2015/001 Studies on the insect population dynamics and insect trap performance in field bean <i>Lablab purpureus</i> (Linnaeus) var: <i>Lignosus</i> . Dr. S. Mohamed Jalaluddin	A specific problem may be targeted instead of combining several individual components.
Horsegram		
12	CPPS/PAI/ENT/HGR/2014/001 Evaluation of Horsegram (<i>Macrotyloma uniflorum</i> Lam.) germplasm for their reaction to bruchids <i>Callosobruchus</i> sp). Dr. P. Thilagam	The results of ovipositional preference at the level screening is not furnished. How the study was conducted in the field?

Plant Pathology

S. No	Project Number	Remarks
Blackgram		
1	CPPS/VMB/PAT/BGR/14/001 Probing of causal agent, transmission nature and evaluation for resistance in blackgram entries against leaf crinkle disease. Dr. V. K. Satya	Project number should be CPPS/VMB/PAT/BGR/2014/001 Before venturing into molecular aspects, identify the right genetic materials at host and vector level and establish the mode of transmission

3. Decisions made on the entries for Variety Release/ART/MLT evaluation from breeders

I. Cultures identified for release

State release

Redgram

Culture name	CRG10-01
Centre	Dept. of Pulses, Coimbatore
Parentage	APK 1 x LRG 41
Duration	170-185 days

Yield of CRG10-01 (1720 kg/ha) is 13% more than CO6 (1522 kg/ha)

Special features: Heavy branching type with more number of pods per cluster; Resistant to SMD and Root rot diseases and tolerant to *Helicoverpa* and *Maruca* pests.

Blackgram

Culture name	COBG 10-05
Centre	Dept. of Pulses, Coimbatore
Parentage	N 5 x <i>V.mungo</i> var <i>silvestris</i>
Duration	105-120 days

Yield of COBG 10-05 (877 kg/ha) is 10.2% and 12.0% more than the yields of CO 6 (798 kg/ha) and VBN 6 (783 kg/ha) respectively

Special features: Medium bold seeded; Resistant to MYMV

Blackgram for Ricefallow conditions

Culture name	ADBG 13-004
Centre	TRRI, Aduthurai
Parentage	VBN 1 x VBG 04-006
Duration	70 days

Yield of ADBG 13-004 (764 kg/ha) is 16.8% more than the yield of ADT 3 (636 kg/ha) with 100 grain weight of 4.68g.

Culture name	KKB 05-011
Centre	AC&RI, Killikulam
Parentage	COBG 643 x VBN 3
Duration	65-70 days

Yield of KKB 05-011 (606 kg/ha) is 14.3% more than the yield of ADT 3 (530 kg/ha) with moderate resistance to MYMV and pod borer and resistance to root knot nematode.

Greengram

Culture name	COGG 980
Centre	Dept. of Pulses, Coimbatore
Parentage	VBN (Gg) 2 x VC 6157B-70P
Duration	60-65 days

Yield of COGG 980 (853 kg/ha) is 11.1% more than the yield of CO (Gg) 7 (768 kg/ha) with determinate plant type, synchronized maturity and larger seeds; moderately resistant to MYMV

Cowpea

Culture name	VCP 09-013
Centre	NPRC, Vamban
Parentage	TLS 38 x VCP 16-1
Duration	70-75 days

Yield of VCP 09-013 (915 kg/ha) is 11.72% and 12.68% more than the yields of CO (Cp) 7 (819 kg/ha) and VBN 1 (812 kg/ha) respectively

Special features: Bold seeded, determinate plant type with synchronized maturity and brown seeds.

II. Cultures identified for the evaluation under ART – 2016-17

Crop	Culture/check	Spacing	Season
Redgram (Long duration)	1. CRG 10-12 2. CO 6 (C) 3. VBN 2 (C)	90 x 30 cm	Kharif (July-August)
Blackgram	1. VBG 10 -010 (R) 2. COBG 11-02 (R) 3. VBG 11-016 (N) 4. VBN 6 (C) 5. VBN 8 (C)	30 x 10 cm	Kharif (June-July) Rabi (Sep.-Oct)
Greengram	1. VGG 05-009 (N) 2. VBN 3 (C) 3. CO (Gg) 8 (C)	30 x 10 cm	Kharif (June-July) Rabi (Sep.-Oct)
Cowpea	1. VCP 09-019 (R) 2. VBN 1 (C) 3. CO (Cp) 7 (C)	45 x 15 cm	Rabi (Sep.-Oct)
Number of ARTs and Location	KVKs: Vamban, Sirugamani, Kuntrakudi, Madurai, Ramnad, Virudhachalam, Tindivanam, Vrinjipuram, Paparapatti and Tirur (40 trials - Four trials in each KVK)		
	Department of Agriculture, Districts Villupuram, Vellore, Thiruvannamalai, Cuddalore, Dharmapuri, Krishnagiri, Salem, Namakkal, Coimbatore, Erode, Trichy, Perambalur, Karur, Pudukkottai, Madurai, Theni, Dindigul, Virudhunagar, Sivagangai and Thirunelveli (120 Trials – six trials in each district)		

Scientists in-charge for the monitoring of ARTs at different districts

Districts/KVKs	Crop	Scientist Incharge
Thiruvannamalai Villuppuram Cuddalore Vellore Namakkal Karur Dharmapuri	Redgram	Dr. A. Thangahemavathy, Coimbatore Dr. Gopikrishnan, Virinjipuram
	Blackgram Greengram	Dr. D. Kumaresan, Coimbatore

Krishnagiri Coimbatore KVK, Papparappatti KVK, Virudhachalam KVK, Tindivanam KVK, Tirur KVK, Virinjipuram	Cowpea	Dr.P.Anantharaju, Coimbatore
Erode Salem Perambalur Trichy Pudukkottai Madurai Sivagangai KVK, Vamban KVK, Sirugamani KVK, Kundrakudi KVK, Madurai	Redgram	Dr.S.Lakshmi Narayanan, Vamban
	Cowpea	Dr.K.Thangaraj, Madurai
	Blackgram Greengram	Dr.A.Mahalingam, Vamban Dr.K.Iyyanar, Aduthurai
Dindigul Theni Virudhunagar Tirunelveli KVK, Ramnad	Redgram Blackgram Greengram Cowpea	Dr.Shoba, Killikulam Dr.Malini, Kovilpatti

III. Cultures identified for the evaluation under Multi location trial – 2016-17

1. Multilocation Trial – Redgram (Short duration)

Design : RBD	No. of replications : Five
Plot size : 4 × 3 m ²	Seed Quantity : 800 g/entry/location
Spacing : 60 x 20 cm	

Culture	Season	Locations
1. CRG 2012 – 20 (R) 2. CRG 2013-12 (N) 3. VBN 3 (C) 4. CO (Rg) 7 (C)	Kharif (June-July)	Vamban, Coimbatore, Paiyur, Melalathur, Yethapur, Thanjavur, Virinjipuram

Note: Screening for pest and disease will be done at NPRC, Vamban and Dept. of Pulses, Coimbatore.

2. Multilocation Trial – Redgram (Long duration)

Design : RBD	No. of replications: Four
Plot size : 5 × 4 m ²	Seed Quantity : 900g/ entry/location
Spacing : 90 x 30 cm	

Culture	Season	Locations
1. CRG 2012-25(R) 2. CRG 2012-30(R) 3. CRG 2013-01 (N) 4. VBN 2 (C) 5. CO (Rg) 6 (C)	Kharif (July-August)	Vamban, Coimbatore, Paiyur, Melalathur, Yethapur, , Virinjipuram

Note: Screening for pest and disease will be done at NPRC, Vamban and Dept. of Pulses, Coimbatore

Features of the Redgram MLT cultures

S. No	Culture	Parentage	Grain yield (kg/ha)	Yield increase over check (%)	Special features
1	CRG 2012 – 20 (R)	Vamban 3 x H 2001-4	1616	18.3 (CO 7)	Short duration , high yield, resistant to SMD and wilt
2	CRG 2013-12 (N)	ICPL 2052 x ICPL 86020	1509	15.7 (CO 7)	High yielder, SMD and Wilt tolerance
3	CRG 2012-25(R)	Co 6 x IC 525427	1966	7.5 (VBN 2)	High yield, resistant to SMD and Wilt
4	CRG 2012-30(R)	Co(Rg)7 x LRG 41	2080	8.9 (VBN 2)	High yield, resistant to SMD and Wilt
5	CRG 2013-01(N)	Co 6 x JKM 198	1894	12.4 (VBN 2)	SMD and Wilt resistant

3. Multilocation Trial – Blackgram

Design : RBD	No. of replications : Three
Plot size : 4 × 3 m ²	Seed Quantity : 200 g/entry/location
Spacing : 30 × 10 cm	

Culture	Season	Locations
1. VBG 11- 053(R) 2. COBG 11-03 (R)	Kharif (July-August)	Vamban, Coimbatore, Paiyur, Madurai, Killikulam and Virinjipuram

3. TNJ 11029(R) 4. TADT 26 (R) 5. ADBG 13 004 (R) 6. VBG 12-062 (N) 7. VBG 12-111 (N) 8. ADBG 13 023(N) 9. AD(TR)BG14003(N) 10. COBG 13-04(N) 11. KKB-14-001(N) 12. VBN 6 (C) 13. VBN 8 (C) 14. ADT 3	Rabi (September-October)	Coimbatore, Vamban, Aruppukottai, Kovilpatti, Madurai, Chettinad, Tindivanam and Trichy
	Rice fallow (January – February)	Aduthurai, SWMRI Thanjavur and Killikulam
	Summer Irrigated (February – March)	Aduthurai, SWMRI Thanjavur, Vamban, Coimbatore and KVK Needamangalam

Note: Screening for pest and disease will be done at NPRC, Vamban and Dept. of Pulses, Coimbatore.

Features of the proposed culture

S. No	Culture	Parentage	Grain yield (kg/ha)	Yield increase over check (%)	Special features
1	VBG 11- 053(R)	VBG 73 x <i>V. mungo</i> var. <i>silvestris</i>	1006	18.5 (VBN 6)	High yield and MYMV resistant
2	COBG 11-03 (R)	VBN 1 x <i>V. mungo</i> var. <i>silvestris</i>	943	10.0 (CO 6)	High yield and MYMV resistant
3	TNJ 11029(R)	VBN 3 x PBG 4	1195	5.3 (ADT 5)	High yield suitable for summer irrigated
4	TADT 26 (R)	TU 94-2 x <i>V. mungo</i> var. <i>silvestris</i>	788	31.3 (ADT 3)	Resistant to powdery mildew and suitable for rice fallow
5	ADBG 13 004 (R)	VBN 1 x VBG 04-006	761	18.8 (ADT 3)	High yield, erect type and suitable for Rice fallow
6	VBG 12-062 (N)	PU 31 x CO 6	1242	46.3 (VBN 6)	High yield and MYMV resistant
7	VBG 12-111 (N)	Mash 114 x VBN 3	1168	37.6 (VBN 6)	High yield and MYMV resistant
8	ADBG 13 023 (N)	ADT 5 x PBG 4	772	9.65 (ADT 3)	High yield and suitable for rice fallow

9	AD(TR)BG14003 (N)	Mutant of ADT 3	746	25.6 (ADT 3)	High yield and suitable for rice fallow
10	COBG 13-04 (N)	T 9 x ADT 5	1009	11.0 (CO 6)	High yield, MYMV tolerant and large seeded type
11	KKB-14-001 (N)	IPU 2006-01 x ADT 3	922	11.2 (ADT 3)	High yield, resistant to YMV. Suitable for Summer irrigated and rice fallows.

4. Multilocation Trial – Greengram

Design : RBD	No. of replications : Three
Plot size : 4 × 3 m ²	Seed Quantity : 200 g/entry/location
Spacing : 30 × 10 cm	

Culture	Season	Locations
1. VGG 10 – 008 (R) 2. COGG 11- 02 (R) 3. ADGG 13034(R) 4. TMGG-11-018 (R) 5. COGG 13-19 (N) 6. ADGG 13-009 (N) 7. VMGG 012-005 (N) 8. TMGG 11-035 (N) 9. VBN 3 (C) 10. CO 8 (C) 11. ADT 3 (C)	(Kharif)June-July	Vamban, Coimbatore, Paiyur, Madurai, Virinjipuram and Killikulam
	Rabi (September-October)	Coimbatore, Vamban, Aruppukkotai, Kovilpatti, Madurai, Chettinad, Tindivanam and Trichy
	Rice fallow (January – February)	Aduthurai, SWMRI Thanjavur and Killikulam
	Summer Irrigated (February – March)	Aduthurai, Thanjavur, Vamban, Coimbatore and KVK Needamangalam

Note: Screening for pest and disease will be done at NPRC, Vamban and Dept. of Pulses, Coimbatore.

Features of the proposed cultures

S. No	Culture	Parentage	Grain yield (kg/ha)	Yield increase over check (%)	Special features
1	VGG 10 –008 (R)	PDM 139 x BB 2664	1027	18.05 (VBN 3)	High yield and moderately resistant to MYMV

2	COGG 11-02 (R)	COGG 912 x IPM 02-03	929	11.34 (CO 8)	Synchronous maturity, Determinate type and bold seeded type
3	ADGG 13034(R)	Mutant of CO 7	625	18.50 (ADT 3)	High yield and moderately resistant to MYMV
4	TMGG 11-018 (R)	CO 6 / UPM-02-18 / VBN 2	1110	25.70 (CO 8)	Early maturity, high yielding, YMV resistant
5	COGG 13-19 (N)	CO 6 x COGG 912	1012	11.82 (CO 8)	High yield, MYMV tolerant and Shiny green seeds
6	ADGG 13-009 (N)	Mutant of CO7	613	16.30 (ADT 3)	High yield and MYMV tolerant
7	VMGG 012-005 (N)	VRM (Gg) 1 x Pusa bold	1045	19.7 (CO 8)	Early and MYMV resistant
8	TMGG 11-035 (N)	COGG 936 x CO 6	1139	34.7 (CO 7)	Early and MYMV resistant

5. Multilocation Trial – Cowpea

Design : RBD	No. of replications : Four
Plot size : 4 × 3 m ²	Seed Quantity : 250 g/entry/location
Spacing : 45 × 15 cm	

Culture	Season	Locations
1. VCP 12 – 020 (R) 2. VCP-12-024 3. VCP-12-016	Kharif (July-August)	Vamban, Coimbatore, Paiyur, Madurai, Killikulam and Virinjipuram
4. VBN 1 (C) 5. CO (Cp) 7 (C)	Rabi (September-October)	Coimbatore, Vamban, Arupukottai, Kovilpatti, Madurai, Perambalur and Trichy

Note: Screening for pest and disease will be done at NPRC, Vamban and Dept. of Pulses, Coimbatore.

Features of the proposed culture

S. No	Cultures	Parentage	Grain yield (kg/ha)	Yield increase over check (VNB 1) (%)	Special features
1.	VCP 12 – 020 (R)	CO (Cp) 7 x VBN 1	1445	7.7	High yield and preferable seed color
2.	VCP 12-024 (N)	CO(Cp)7 x VBN 1	1780	32.6	High yield and preferable seed colour

3.	VCP 12-016 (N)	VBN 1 x VCP 10-001	1970	46.8	High yield and preferable grain quality
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6. Multilocation Trial – Mochai

Design : RBD	No. of replications : Seven
Plot size : 4 × 3 m ²	Seed Quantity : 1.2 kg/entry/location
Spacing : 90 × 30 cm	

Culture	Locations	Season
1. PYR 03-004 (R) 2. CO 1 (C) 3. CO 2 (C)	Virinjipuram, Vaigaidam, Yethapur, Paiyur and Melalathur	Kharif (July-August)

Note: Screening for pest and disease will be done at NPRC, Vamban and Dept. of Pulses, Coimbatore.

Features of the proposed culture

S. No	Cultures	Parentage	Grain yield (kg/ha)	Yield increase over check (CO 2) (%)	Special features
1.	PYR 03-004 (R)	Selection from CO6A	1016	14.0	High yield and drought tolerant

Important Dates in conduction of MLT and ART

Activities	Season	Last date for receipts	Date of Despatch
Seed material of the proposed ART entries at Vamban	Kharif	15.06.2016	05.07.2016
	Rabi	10.09.2016	20.09.2016
Seed material of the proposed MLT entries at Vamban	Kharif	15.06.2016	05.07.2016
	Rabi	10.09.2016	30.09.2016
	Rice fallow	30.11.2016	15.12.2016
	Summer Irrigated	30.01.2017	15.02.2017
Sowing report at Vamban	Kharif	30.07.2016	-
	Rabi	30.10.2016	
	Rice fallow	31.01.2017	
	Summer Irrigated	31.03.2017	
Visit of MLT/monitoring teams	Kharif	Sep. 2016	-
	Rabi	Dec. 2016	
	Rice fallow	Feb. 2017	
	Summer Irrigated	May. 2017	
Visit of ART monitoring team	Kharif	Sep. 2016	-
	Rabi	Dec. 2016	

Date for receiving the trials results at Vamban for compilation	Kharif	15.12.2016	-
	Rabi	28.02.2017	
	Rice fallow	15.04.2017	
	Summer Irrigated	30.06.2017	

Monitoring team to visit MLT 2016-17

Name of the scientist	Crop	Season	Station to be visited
Dr. R. P. Gnanamalar, Vamban Dr. S. Lakshmi Narayanan, Vamban Dr. A. Mahalingam, Vamban	Redgram Blackgram Greengram Cowpea Mochai	Kharif 2016	Coimbatore Virinjipuram Killikulam
	Blackgram Greengram Cowpea	Rabi 2016-17	Coimbatore
	Blackgram Greengram	Summer Irrigated 2016-17	Coimbatore
	Blackgram Greengram	Summer Irrigated and Rice fallow 2016-17	Killikulam Aduthurai
Dr. J.R. Kannan Bapu, CBE Dr. D. Kumaresan, CBE Dr. A. Thangahemavathy, CBE	Redgram Blackgram Greengram Cowpea Mochai	Kharif 2016	Vamban Yethapur
	Blackgram Greengram Cowpea	Rabi 2016-17	Trichy Chettinadu Vamban
	Blackgram Greengram	Summer Irrigated 2016-17	Vamban
Dr. M. Pandian, Vrinjipuram Dr. R. Sudhagar, Coimbatore D. A. Sheeba, Tirur	Redgram Blackgram Greengram Cowpea Mochai	Kharif 2016	Melalathur Paiyur
	Blackgram Greengram	Rabi 2016-17	Tindivanam
Dr. S. Geetha, Trichy Dr. P. Anantharaju, Coimbatore Dr. S. Lakshmi Narayanan, Vamban	Blackgram Greengram Cowpea	Kharif 2016 Rabi 2016-17	Madurai
Dr. E. Murugan, Kovilpatti Dr. Thangaraj, Madurai Dr. Shoba, Killikulam	Mochai	Kharif 2016	Vaigaidam
	Blackgram Greengram Cowpea	Rabi 2016-17	Aruppukottai

Dr. Arumugam Pillai, Killikulam Dr. Thangaraj, Madurai Dr. Shoba, Killikulam	Cowpea Blackgram Greengram	Rabi 2016-17	Kovilpatti
Dr. T. Kalaimagal, Trichy Dr. M. Sakila, Echankottai Dr. K. Aiyanar, Aduthurai	Redgram	Kharif 2016	Thanjavur
	Cowpea	Rabi 2016	Veppanthattai
	Blackgram Greengram	Rice Fallow and Sumer Irrigated 2016-17	Thanjavur Needamangalam

4. Decision made on OFT evaluation for technologies from Crop Management and Crop protection Scientists

CROP MANAGEMENT

OFT proposed during 2015-16 (Continued)

1. Conservation tillage and supplemental irrigation for rainfed blackgram

Coordinating centre : Dr. S. Vallal Kannan, Assistant Professor(Agronomy), AEC&RI, Kumulur
Centres : ARS, Kovilpatti and DARS, Chettinad

2. Sprinkler irrigation on different blackgram varieties under summer irrigated condition

Coordinating centre : Dr. G. Senthil Kumar, Assistant Professor (Agronomy), TRRI, Aduthurai
Centres : ARS, Bhavanisagar, AC & RI, Madurai and DARS, Chettinad

OFT proposed for 2016 – 17

3. Yield maximization in redgram

Coordinating centre: Dr. K. Kalaichelvi, Asst. Professor (Agronomy), Dept. of Pulses, TNAU,
Coimbatore

Centres Scientists incharge

NPRC, Vamban : Dr. C. Vanitha, Assistant Professor (SST)

RRS, Paiyur : Dr. C. Sivakumar, Assistant Professor (Agronomy)

CROP PROTECTION

1. Evaluation of botanicals and insecticides against pulse beetle, *Callosobruchus maculatus* (Fabricius) for long term storage

Replication: Four

Design: CRBD

Treatments

T₁ – TNAU Sweet flag 6 EC @ 10 ml/kg of seed

T₂ – Coconut oil @ 10 ml/kg of seed

T₃ – Pongamia seed oil derived formulation @ 10 ml/kg of seed

T₄ – Malathion 5 D @ 10g/kg of seed

T₅ – Untreated control

Methodology

One kg of freshly harvested untreated black gram seeds with very high percentage of germination (> 95 %) will be taken for each treatment. Required quantity of insecticide will be diluted in 5 ml of water to treat 1 kg of seeds. Botanicals will be treated directly with seeds without any dilution. Treated seeds will be packed in gunny bag lets and kept in room under ambient condition. During six, nine and twelve months after storage, natural insect infestation and no. of eggs laid will be counted. Simultaneously, 100 g of seeds will be taken in a container and 10 nos. of freshly emerged *Callosobruchus maculatus* adults will be released.

Observations to be recorded

Mortality count will be taken on 3rd, 7th and 15th day after release.

Germination percentage of treated seeds at six, nine and twelve months after storage.

Centres

Scientists incharge

NPRC, Vamban : Dr. C.Vijayaraghavan

Seed Centre : Dr. R.Arulprakash

AC&RI, Madurai : Dr. K.Premalatha

ADAC&RI, Trichy : Dr. P.Yasodha

5. Remarks made by the Vice - Chancellor

CROP IMPROVEMENT

- Research may be intensified in development of rice fallow pulses. (**Action:** TRRI, Aduthurai and AC&RI, Killikulam)
- Bold seeded greengram variety with MYMV resistance may be developed (**Action:** NPRC, Vamban, Dept. of Pulses, TNAU, Coimbatore and ARS, Virinjipuram).
- More emphasis may be given towards the development of multiblooming blackgram variety (**Action:** NPRC, Vamban and Dept. of Pulses, TNAU, Coimbatore).
- Bold seeded greengram culture developed at Virinjipuram may be evaluated at NPRC, Vamban for MYMV.
- Seed Production of redgram BSR 1 may be taken up (**Action:** ARS, Virinjipuram)

CROP MANAGEMENT

- Students may be allotted to study the seed dormancy in redgram (**Action:** Seed Centre, TNAU, Coimbatore)
- Impact of clipping/nipping` of tendrils in horsegram may be studied (**Action:** RRS, Paiyur).
- Transport deficiency in blackgram may be studied (**Action:** NPRC, Vamban and Dept. of Crop Physiology, TNAU, Coimbatore).
- The redgram culture CRG 10-12 may be evaluated under transplanted condition.

CROP PROTECTION

- PG student may be allotted to NPRC, Vamban for storage product management (**Action:** NPRC, Vamban and Dept. of Agricultural Entomology, TNAU, Coimbatore).
- Resistant entries to various pests and diseases identified through screening may be registered with NBPGR (**Action:** Plant Protection Scientists).

6. Action plan for 2016 - 2019

The Action plan for the next three years (2016-19) is appended with proceedings.