

PROCEEDINGS OF THE 36th CROP SCIENTISTS' MEET FOR COTTON HELD ON 26.04.2018

Crop Scientists' Meet 2018 for Cotton was held on 26.04.2018 at University Seminar Hall I, TNAU, Coimbatore under the chairmanship of Dr. K. Ramasamy, Vice-Chancellor. On 25.04.2018 by 9.30 AM, pre-review of the University Research Projects (URP) for crop improvement was taken up by Dr. K. Ganesamurthy, Director, Centre for Plant Breeding and Genetics. During the pre-review meet held at the Directorate, efficiency of the cultures identified by different stations and their genetic potential, works progressed; identifying locations and promoting the advanced cultures / newly released varieties, strengthening the desi cotton breeding programme were discussed. It was proposed to evaluate the advanced stage cultures / newly released varieties at Attayampatti, Salem as these location farmers cultivate cotton variety surabhi. This work will be undertaken by Dr. S. Sivakumar, Professor (PBG), CRS, Veppanthattai.

On 25.04.2018 by 9.00 AM, pre-review of the University Research Projects (URP) for Crop Management was taken up by Dr. C. Jayanthi, Director, Directorate of Crop Management in the presence of Dr. V. Ravi (Director), Tamil Nadu Rice Research Institute, Aduthurai, Dr.D.Jawahar, Special Officer, (Directorate of Natural Resource Management), Dr.B.J.Pandian, Director (Water Technology Centre) and Dr.P.Selvaraju, Special Officer, Seeds. During the pre-review individual presentations were made by scientists on the progress of work made under URP for the year 2017-18. Critical remarks were made by the technical directors on the projects undertaken. Based on the research findings, the technology developed were grouped as for information, OFT and adoption. New project proposals were also presented by scientists for 2018-2021 based on thrust areas.

Pre-review of the University Research Projects (URP) for Crop Protection was taken up by Dr. A.S. Krishnamoorthy, Director, Centre for Plant Protection Studies on 25.04.2018 at Pathology Seminar Hall. During this pre-review meet, he suggested to develop management module for pink bollworm and TSV. Dr. R.Vimala, Professor and Head, CRS, Srivilliputtur made a presentation on the progress of research made in the crop protection. During this review, it was suggested to highlight on pink bollworm biology and their management through thuricide and egg parasitoid. All the plant protection scientists were requested to formulate new projects based on the action plan and need based research.

On 26.4.2018 FN, Dr. K. Ramaraju, Director of Research welcomed the gathering and underlined the importance of cotton in global and national level. Later, action taken on the recommendations given during the last meet and action taken under various themes pertaining to crop improvement were presented by Dr. M. Kumar, Professor and Head, Department of Cotton followed by the presentations of Dr. N. Sakthivel, Associate Professor and Dr. R. Vimala, Professor and Head, CRS, Srivilliputtur for crop management and crop protection respectively. Later, Dr. K. Ganesamurthy, Director, CPBG, Dr. C. Jayanthi, Director, CM and Dr. A.S. Krishnamoorthy, Director, CPPS made presentations on the action plan for 2018-19 under various themes with respect to crop improvement, management and protection respectively.

Observations made by the Vice-Chancellor during the presentations were

1. Sharing germplasm accessions to AC & RI, Killikulam and RRS, Aruppukkottai for evaluation and maintenance (Department of Cotton)

2. Breeding varieties with higher seed index (Department of Cotton)
3. Large-scale demonstration of mechanical harvester for cotton utilizing the funds already provided in collaboration with Agrl. Engineers (Department of Cotton & AEC &RI, TNAU)
4. Improvement of colour cotton and its maintenance without contaminating the white cotton (Department of Cotton)
5. Enlisting the activities to be undertaken in each of the theme and periodical monitoring and evaluation (All the Heads)
6. Conduct of field day in the presence of Dr. K.V. Prabhu, Chairperson, PPV &FRA, New Delhi (Department of PGR)
7. Study related to source: sink ratio (Department of Crop Physiology)
8. Development of *Bt* cotton varieties by utilizing the services of M.Sc. students from CPBG and from CPMB along with one Ph.D. student (Departments of Cotton and Plant Molecular Biology and Biotechnology)
9. Inclusion of ruling *Bt* hybrid as one of the check in yield evaluation trials (Department of Cotton)
10. Undertaking cotton trials at saline soil available in Nagapattinam area (TRRI, Aduthurai)
11. Large scale demonstration of latest desi cotton varieties and pipeline culture at Ottanchathiram (ARS, Kovilpatti)
12. Precautionary measures for farm labourers while handling spray fluids at all the centres and prudent mixing of chemicals (Department of Cotton; CRS, SVPR; CRS, Veppanthattai and ARS, Kovilpatti)

Proceedings of the 36th Cotton Scientists' Meet are presented in the following order.

- 1) Staff Pattern
- 2) Remarks on the individual University Research Projects
- 3) Decisions made on entries for Variety Release/ART/MLT evaluation from breeders and OFTs from Crop Management and Crop Protection Scientists
- 4) Action Plan: 2018-2019

1. Staff Pattern

Station	Designation	Discipline				Total
		PBG	AGR	ENT	PAT	
Coimbatore	Professor	2+1 (AICRP)	-	-	-	7 (3 + 4)
	Assoc. Professor	-	1 (AICRP)	-	-	
	Asst. Professor	1	-	1 (AICRP)	1 (AICRP)	
Srivilliputtur	Professor	-	-	-	1 (PCC)	5 (1 + 4)
	Asst. Professor	1+1 (AICRP)	1 (AICRP)	1 (AICRP)	-	
Veppanthattai	Professor	1	1	-	-	3
	Asst. Professor	1	-	-	-	
Kovilpatti	Asst. Professor	1	-	-	-	1
Aduthurai (Sunnhemp)	Asst. Professor	1 (AICRP)	1 (AICRP)	-	-	2
Total		10	3	2	2	18

Among the 18 scientists, 8 are in Non-Plan Main and 10 are under ICAR AICRP; Under 8 Non Plan Main scientists, 3 are Professor and Heads; 2 are Professors and 3 are Assistant Professors.

For Jute and Mesta, one Assistant Professor each under PBG and Agronomy are working in the AICRP on Jute and Mesta at Aduthurai. Presently, the scientists working under Jute and Mesta scheme are concentrating on jute and mesta (in management research) and on kenaf, roselle and sunnhemp (in improvement research).

List of URP/AICRP/ERP

Crop	Centre	URP	AICRP	EFP	Total
Cotton	Coimbatore	5	1	1	7
	Srivilliputtur	3	1	-	4
	Veppanthattai	2	-	-	2
	Kovilpatti	2	-	-	2
	CPMB	-	-	1	1
Jute and Mesta	Aduthurai	-	1	-	1

2.Remarks for the ongoing University Research Projects

Plant Breeding and Genetics

S. No.	Project Number	Remarks
1.	CPBG/CBE/PBG/COT/2016/001 Dr. N. Premalatha Maintenance and evaluation of germplasm stocks of <i>G.barbadense</i> and <i>G.hirsutum</i> Duration: June 2015 to May 2020	Remaining germplasm be characterized and documented. A consolidated compilation including all the 853 <i>G. hirsutum</i> accessions be brought out. Naked seeded germplasm material be multiplied.
2.	CPBG/CBE/PBG/COT/2012/004* Dr. N. Premalatha Development of compact cotton (<i>G.hirsutum</i> L.) genotypes for high density planting system Duration: July 2012 to May 2018	The project will be over by May 2018 and the completion report be submitted. A new project on evolving genotypes of compact nature with good fibre qualities be proposed. Materials generated from this project be carried over to the new project.
3.	CPBG/CBE/PBG/COT/2017/001 Dr. P. Amala Balu & Dr.M. Kumar Breeding for high yielding long and extra long staple <i>G.hirsutum</i> and <i>G.barbadense</i> cotton varieties suitable for high speed spinning. Duration : June 2017 to May 2022	Entries in AICRP with good fibre qualities be evaluated. TCB 37 culture be tested at locations where <i>G. barbadense</i> culture is grown by involving Dr. S. Sivakumar, Professor (PBG), CRS, Veppanthattai.

4.	<p>CPBG/ CBE/ PBG/ COT/ 2016/002 Dr. M. Kumar</p> <p>Development of high yielding jassid resistant cotton varieties by introgression of genes from wild species.</p> <p>Duration: June 2016 to May 2021</p>	<p>Successful cross combinations be advanced and backcrossed to isolate tetraploids with leaf hopper resistance. Other wild species available in the Department be utilized for developing pre-breeding materials.</p>
5.	<p>CPBG/ CBE/ PBG/ COT/ 2016/003 Dr. P. Amala Balu</p> <p>Maintenance and production of nucleus and breeder seeds of cotton varieties of Department of Cotton, Coimbatore.</p> <p>Duration: May 2016 to April 2021</p>	<p>Quality of the seeds be ensured. Seed production of the recently released varieties by having tie up with seed producing companies be planned.</p>
6.	<p>CPBG/SVP/PBG/COT/2016/001 Dr. K. Thiyagu</p> <p>Evolution of short duration and high yielding cotton (<i>Gossypium hirsutum</i> L.) genotypes suitable for rice fallow and rainfed conditions of southern districts of Tamil Nadu.</p> <p>Duration: August 2016 to July 2021</p>	<p>Tamirabarani tract be concentrated and the entries in the advanced stage be evaluated at select locations.</p>
7.	<p>CPBG/SVP/PBG/COT/2016/002 Dr.M.Gnanasekaran</p> <p>Evolving high yielding medium staple upland cotton varieties (<i>Gossypium hirsutum</i> L.) resistant to jassids for summer irrigated tracts of Tamil Nadu.</p> <p>Duration: April 2016 to March 2021</p>	<p>Advanced stage culture be evaluated for its resistance / tolerance to pests and diseases.</p>
8.	<p>CPBG/SVP/PBG/COT/2015/004* Dr. K. Thiyagu</p> <p>Maintenance of mass pedigree lines and production of nucleus and breeder seeds of SVPR 2, SVPR 3 and SVPR 4 cotton varieties.</p> <p>Duration: April 2015 to March 2018</p>	<p>Quality of the seeds be ensured. Seed production of the recently released varieties by having tie up with seed producing companies be planned.</p>

9.	<p>CPBG/VPT/PBG/COT/2015/001 Dr. K.Bharathi Kumar</p> <p>Evolution of compact, drought tolerant and long staple cotton genotypes (<i>G.hirsutum</i>) suitable for winter rainfed tracts of north western zone of Tamil Nadu. Duration: August 2015 to July 2018</p>	<p>Work can be continued and promising genotypes identified be test verified at other stations as well.</p>
10.	<p>CPBG/VPT/PBG/COT/2016/002 Dr. S. Sivakumar</p> <p>Development of high yielding long staple cotton varieties and hybrids for winter rainfed in Tamil Nadu. Duration: December 2015 to November 2018</p>	<p>Segregants available from Suraj x TCH 1819 be followed to isolate desirable genotypes. Use of MCU 4 (S) in one of the crosses be spelt. Seed production of TVH 001 be also concentrated.</p>
11.	<p>CPBG/KPT/PBG/COT/2015/006 Dr. S. Hari Ramakrishnan</p> <p>Evolving medium staple <i>G.hirsutum</i> cotton cultivar with resistance to leaf hopper (Jassids). Duration: September 2015 to August 2020</p>	<p>The works to be undertaken in this project are in line with the similar works undertaken at Coimbatore and Srivilliputhur with an ultimate aim of breeding a genotype with leaf hopper tolerance and yield. Upon completion of the project, the materials can be handed over to CRS, SVPR and Kovilpatti centre can concentrate only on diploid cotton.</p>
12.	<p>CPBG/KPT/PBG/COT/2015/007 Dr. S. Hari Ramakrishnan</p> <p>Evolution of high yielding <i>G.arboreum</i> cotton varieties suitable for rainfed condition in southern districts of Tamil Nadu. Duration: October 2015 to September 2020</p>	<p>Concentration should be much on developing cotton genotypes suitable for surgical purposes with more mic. and absorption capacity. Available germplasm seeds be deposited in the Ramaiah Gene Bank and they can be characterized for the traits of interest.</p>

* Submit completion report

3. Decisions made on entries for ART/MLT evaluation by breeders

A. CROP IMPROVEMENT

a. Cultures identified for evaluation under ART

(i) ART I : Compact culture (ART 1 (Compact)/2018-19)

Compact Cultures	Rice fallow
1.TCH 1819 2.TCH 1822 3. CO 15 (C) 4. Suraj (C)	(five per district) 1. Thanjavur 2. Tiruvarur 3. Nagapattinum 4. Tirunelveli
Number of ARTs	20
Scientist incharge	Dr.N.Premalatha Dr.K.Bharathi kumar

Traits to be observed

1. Days to 50% flowering
2. Days to first bursting
3. No. of bolls/ sq. m.
4. Seed cotton yield @ 120 days
5. Total seed cotton yield kg/ha.

(ii) ART II : *G. hirsutum* (variety) (ART 2/2018 – 19)

Culture	Winter Irrigated	Summer Irrigated	Winter Rainfed
1. TCH 1199 2. TKH 1185/1/3 3. CO 14 (Check)	Coimbatore, Theni, Salem, Dharmapuri, Erode, Villupuram, Namakkal, Tirupur and Dindigul Season: August 18- Jan 19	Theni, Salem, Tuticorin, Virudhunagar, Tirunelveli, Madurai, Dindigul, Thanjavur, Trichy and Tiruvarur Season: Feb 19 – July 20	Tuticorin, Virudhunagar, Tirunelveli, Ramanadhapuram, Madurai and Perambalur Season: Sept 18 – Feb 19
Number of ARTs	30	30	20
Scientist incharge	Dr.N.Premalatha	Dr.K.Thiyagu	Dr.S. Hariramakrishnan and Dr. K. Bharathi Kumar

b. Cultures identified for the evaluation under Multilocation Trial –2018-19

(i) Multilocation Trial *G.hirsutum* (variety)

Design : RBD No. of replications : Three
 No. of rows : Six Spacing : 90 x 45 cm
 Seed qty : 200 g / entry/location

Culture	Locations	Season
1. TVH 001(R)	Coimbatore	August – January
2. TSH 325 (R)	(Both winter and summer)	February-July
3. TSH 324 (R)	Srivilliputtur	August – January
4. TKH 1197/III/2 (R)	(Both winter and summer)	February-July
5. TCH 1828 (R)	Veppanthattai (winter)	August – January
6. TCH 1837 (R)	Kovilpatti (winter)	September - February
7. TSH 357 (N)	Aruppukkottai (winter)	September - February
8. TSH 367 (N)		
9. SVPR 5 (Check)		
10. CO 14 (Check)		
11. KC 3 (Check)		

(ii) Multilocation Trial *G.hirsutum* (compact)

Design : RBD No. of replications : 3
 No. of rows : Six Spacing : 60 x 15 cm
 Seed qty : 300 g/entry/location

Culture	Locations	Season
1. TSH 330 (R)	Coimbatore	August – January
2. TCH 1873 (R)	(Both winter and summer)	February-July
3. TCH 1875 (R)	Srivilliputtur	August – January
4. TCH 1897 (R)	(Both winter and summer)	February-July
5. SURAJ (C)	Veppanthattai (winter)	August – January
	Kovilpatti (winter)	September - February
	Aruppukkottai (winter)	September - February

3. Multilocation Trial *G.barbadense* (variety)

Design : RBD No. of replications : Seven
 No. of rows : Seven Spacing : 90 x 45 cm
 Seed qty : 250 g/entry/location

Culture	Locations	Season
TCB 37	Coimbatore	August – January
TCB 26	Srivilliputtur	August – January
Suvin	Veppanthattai	August – January

Important Dates in conduction of MLT & ART

Date of receiving the seed material of the proposed entries at Coimbatore	15.06.2018
Date of dispatching the coded entries for ART/ MLT as per season's requirement	30.06.2018
Date of receiving sowing report at CBE season wise	
Winter irrigated	15.09.2018
Summer irrigated	15.02.2019
Winter rainfed	15.10.2018
Rice fallow	15.02.2019
Visit of MLT/ monitoring teams	
Coimbatore	Nov. 2018 & May 2019
Srivilliputhur	Nov. 2018 & May 2019
Veppanthattai	Dec. 2018
Kovilpatti	Dec. 2018
Visiting of ART monitoring team season wise	
Winter irrigated	November 2018
Summer irrigated	April 2019
Winter rainfed	December 2018
Rice fallow	April 2019
Date for receiving the trials results at CBE for compilation season wise	
Winter irrigated	31.03.2019
Summer irrigated	31.07.2019
Winter rainfed	15.04.2019
Rice fallow	31.05.2019

Monitoring team to visit MLT

Name of the scientist (s)	Station to be visited
Dr. K. Thiyagu Dr. K. Bharathi kumar	Coimbatore
Dr. P. Amala Balu Dr. N. Premalatha	Veppanthattai
Dr. M. Kumar Dr. L. Mahalingam	Srivilliputtur
Dr. S. Sivakumar Dr. M. Gnanasekaran	Kovilpatti

CROP IMPROVEMENT

Action plan for 2018-2019 on the identified themes

Theme No. 1	Evaluation and maintenance of germplasm			
Theme Leader	Dr. M.Kumar, Professor & Head, Department of Cotton			
UR Projects	1. CPBG/CBE/PBG/COT/2016/001 2. CPBG/CBE/PBG/COT/2016/002 3. CPBG/CBE/PBG/COT/2016/003 4. CPBG/SVP/PBG/COT/2015/004			
S.No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
			Winter 2018	
1.	Pre-breeding materials development and utilization of wild relatives for exploiting HPR	Dr. M.Kumar	Forwarding of F ₃ – F ₄ generation based on yield, fibre properties and pest and disease resistance. Utilizing the segregating materials obtained from amphiploids for evaluation and backcrossing selected amphiploids with MCU 5 and KC 3.	<ul style="list-style-type: none"> Utilizing wild species for infusing pest and disease resistance Genotypes with good fibre quality and tolerance/resistance to pest and diseases
2.	Evaluation, characterization and documentation of cotton germplasm	Dr. N.Premalatha	Evaluation of 53 germplasm of <i>G. hirsutum</i> and 160 germplasm of <i>G. barbadense</i> with 10 checks for characterization, documentation and for preparing a database in collaboration of PGR.	<ul style="list-style-type: none"> Preparation of a document on 853 <i>G. hirsutum</i> and 160 <i>G. barbadense</i> germplasm Making the key traits of available germplasm on line needed trait's improvement
	<ul style="list-style-type: none"> Sharing of 853 <i>Gossypium hirsutum</i> germplasm accessions one set to AC & RI, Killikulam for evaluation and maintenance at irrigated condition and another set at RRS, Aruppukottai for rainfed condition. 			

Theme No. 2	Developing long and extra long staple cotton varieties			
Theme Leader	Dr. S.Siva Kumar (PBG), Professor (PBG), CRS, Veppanthattai			
Projects	1. CPBG/CBE/PBG/COT/2017/001		2. CPBG/VPT/PBG/COT/2016/002	
S.No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
1.	Evaluation of segregating materials	Dr. M. Kumar Dr. S. Sivakumar	Evaluation of segregating materials (F ₃ s) and selection of superior segregants (F ₃ s) for extra-long fibre length and fibre strength. Quality evaluation and forwardal recombinants.	Identifying superior genotypes with long and extra-long staple fibre quality
2.	Identification of promising cultures and yield evaluation at station trials	Dr. M. Kumar Dr. S. Sivakumar	Yield estimation of pipe line cultures in summer and winter	
3.	Screening of advanced cultures for pest and diseases	Dr.K.Senguttuvan Dr.P. Latha	Screening of advanced elite cultures for pest & diseases at Coimbatore	
4.	Advancement of promising entries to MLT/AICCIP	Dr. M. Kumar Dr. S. Sivakumar	MLT-Winter irrigated at CBE and SVPR MLT-Winter rainfed at VPT and KPT	
5.	Conducting OFT/ FLD	Dr. N. Sakthivel Dr. P. Amala balu	Promoting CO 14, TCH 1819 and other identified cultures in advanced stage of testing through FLDs	

Theme No. 3	Development of high yielding medium staple cotton varieties (<i>G.hirsutum</i> L.) resistant to pests			
Theme Leader	Dr.M.Gnanasekaran, Assistant Professor (PBG) , Cotton Research Station, Srivilliputtur			
Projects	1. CPBG/SVP/PBG/COT/2016/002 2. CPBG/KPT/PBG/COT/2015/006			
S. No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
1.	Synthesizing new crosses and evaluation of segregating materials	Dr.M.Gnanasekaran	Study of segregating materials (F ₂ S, F ₃ S, F ₄ S, F ₅ S) Forwardal of progenies	Newer crosses synthesized for getting desirable recombinants.
2.	Identification of promising cultures and yield evaluation at station trials	Dr.M.Gnanasekaran	Studying different yield trials (RRYT, PVT, and AVT) Seed production of promising cultures identified in AVT Artificial screening of advanced cultures against jassids	Identifying desirable entries with yield and pest tolerance.
3.	Screening of advanced cultures for pest and diseases	Dr.K.Sasikumar Dr.R.Vimala	Screening of advanced elite cultures for pest & diseases at Srivilliputtur	Confirming the tolerance / resistance of better performing entries.
4.	Advancement of promising entries to MLT/AICCIP and conduct of MLT	Dr.M.Gnanasekaran Dr. N. Premalatha Dr.K.Bharathikumar Dr.S.Hariramakrishnan	MLT-Summer irrigated & Winter irrigated at CBE and SVPR MLT-Winter rainfed at VPT and KPT	Identifying promising genotypes.
5.	Conducting ART and submission of release proposal	Dr. M.Gnanasekaran	Evaluation of advanced cultures through ART	Release of promising genotypes at National and State level.

Theme No. 4	Development of compact and short duration cotton genotypes (<i>G. hirsutum</i>) suitable for HDPS and rice fallow			
Theme Leader	Dr. N. Premalatha, Assistant Professor (PBG), Department of Cotton			
Projects	1. CPBG/CBE/PBG/COT/2012/004 2. CPBG/SVP/PBG/COT/2016/001 3. CPBG/VPT/PBG/COT/2015/001			
S. No.	Name of the Activity	Name of the scientist and centre	Year 2018-19	Deliverables
1.	Evaluation of advanced breeding lines to identify stable genotypes under rainfed and irrigated conditions	Dr. N. Premalatha Dr. K. Thiyagu Dr. K. Bharathikumar	Evaluation of promising genotypes identified for compactness in station trials /AICRP	Identifying good ideotype fitting for HDPS and rice fallow
2.	Selection of genotypes and synthesizing new cross	Dr.K. Thiyagu	Effecting new crosses and study of F ₁ generation and segregating materials (F ₂ s)	Identifying superior crosses and forwardal of progenies
3.	Optimization of spacing and fertilizer requirement for TCH 1819 and other compact cultures under HDPS	Dr. R. Veeraputhiran Dr. N. Sakthivel	Standardizing suitable spacing, fertilizer and including package of practices for the advanced cultures	Standardizing agronomic package of practices
4.	Developing suitable Integrated Pest and Disease Management (IPDM) module for HDPS	Dr. K. Sasikumar Dr. R. Vimala	Large scale demonstration of IPDM on HDPS where elite compact cultures are grown under OFT /FLD	Arriving at suitable IPDM for HDPS and popularization of package among the farmers
5.	Management of plant geometry through growth retardants under HDPS	Dr. R. Veeraputhiran	Confirmatory trials and Large scale field demonstration	Arriving at suitable dose for adoption

Theme No. 5	Development of diploid cotton (<i>G. arboreum</i>) with high yield and fibre length as well as suitable for surgical purpose			
Theme Leader	Dr.S. Hari Ramakrishnan, Assistant Professor, ARS, Kovilpatti			
Projects	CPBG/KPT/PBG/COT/2015/007			
S. No.	Name of the Activity	Name of the scientist and centre	Year 2018-19	Deliverables
1.	Selection of genotypes and synthesizing new crosses and evaluation of segregating materials	Dr. S. Hari Ramakrishnan	The newly developed F ₁ s will be evaluated in Winter 2018	Identifying progenies with higher micronaire with bigger bolls.

Theme No. 6	Development of <i>Bt</i> cotton varieties		
Theme Leader	Dr. N. Balakrishnan, Assistant Professor, CPMB & Dr. V. Thiruvengadam, Assistant Professor (PBG), Department of PGR		
Projects	New project to be jointly proposed by Dr. N. Balakrishnan, Assistant Professor, CPMB & Dr. V. Thiruvengadam, Assistant Professor (PBG), Department of PGR, CPBG		
S. No.	Name of the Activity (2018-19)	Name of the scientist and centre	
1.	Standardizing embryogenic calli induction and regeneration protocol for Coker and TNAU varieties	Dr. V. Thiruvengadam, Assistant Professor (PBG), Department of PGR	
2.	<i>Bt</i> construct development using native genes	Dr. S. Varanavasiappan, Assistant Professor, CPMB & Dr. N. Balakrishnan, Assistant Professor, CPMB	
3.	Field evaluation of available backcross populations	Dr. N. Premalatha, Assistant Professor (PBG), Department of Cotton	

Theme No 7.	Studies on floral biology and pollination mechanism to develop efficient genotypes in Sunnhemp	
Theme Leader	Dr. R.Puspha, Assistant Professor (PBG), TRRI, Aduthurai	
Projects	CPBG/ADT/PBG/GMC/2017/001	
S. No.	Name of the Activity (2018-19)	Name of the scientist and centre
1.	Evaluation of germplasm and identifying elite genotypes	Dr. R.Puspha, Assistant Professor (PBG), TRRI, Aduthurai
2.	Understanding anthesis and reproductive biology	
3.	Identifying genotypes with higher biomass and using them in crossing programme	

CROP MANAGEMENT

List of URP/AICRP/ERP

Crop	Centre	URP	AICRP	EFP	Total
Cotton	Coimbatore	-	1	-	1
	Srivilliputtur	1	1	-	2
	Veppanthattai	1*	-	-	1
	Kovilpatti	1*	-	-	1
Jute and Mesta	Aduthurai	-	1	-	1

- Single URP number with two locations

A. Remarks on the ongoing University Research Projects

I. Agronomy

S. No.	Project Number and Title	Remarks
1.	<p>DCM/ KPT/ AGR/ COT/ 2016/ 001 Effect of drought mitigation technology on growth and yield of rainfed cotton (with supplemental irrigation) (August, 2016 - July 2019)</p> <p>CRS, Veppanthattai (Co - ordinating Centre): Dr. N. Meyyazhagan, Prof. & Head (Agron.) Dr. S. Nithila (CRP), ADAC&RI, Trichy Dr. T. Eevera, (SST), ADAC&RI, Trichy</p> <p>ARS, Kovilpatti Dr. M. Joseph, Asst. Prof (Agronomy) Dr. C. Rajababu (CRP), AC&RI, Killikulam Dr. B. Venu Devan, (SST), AC&RI, Killikulam</p>	<ul style="list-style-type: none"> • Designer seed already includes seed hardening with 1 % KCl for 6 hours. • In sub plot treatments, pusa hydrogel may be deleted and one or two additional treatments may be added in discussion with Crop Physiologist. • Revised proposal in RBD may be submitted separately by Kovilpatti & Veppanthattai centres.
2.	<p>DCM/SVPR/AGR/COT/2016/001 Management of plant density and architecture under high density planting system (HDPS) for mechanized cotton production (July, 2016 - June, 2018)</p> <p>Dr. R. Veeraputhiran Assistant Professor (Agronomy) CRS, Srivilliputtur Dr. M.Gunasekaran, Professor and Head. CRS, Srivilliputtur</p>	<ul style="list-style-type: none"> • Two years completed. Two year results revealed that Mepiquat chloride spray better as growth retardant @ 50 g a.i/ha at square formation and boll development stage performed with higher yield • Tembotrione spray as defoliant @ 200 ml/ha on 130 DAS performed better with higher yield

		<ul style="list-style-type: none"> Findings may be taken as OFT (In four centres) Srivilliputtur aslead centre, Coimbatore, Kovilpatti and Veppanthattai. The project may be closed and completion report may be submitted.
3.	<p>SEED / CBE/ SST/ COT/ 2016/ 001 Polymer seed coat for cotton 'TNAU FORTI Seed' Dr. R. Umarani, Professor and Head, SST Dr.Subbulakshmi Loganadhan, Professor (Agronomy) Dr. R.G. Anitha, Asst.Prof.(Agrl. Microbiology)</p>	<ul style="list-style-type: none"> Outcome of TNAU SEED COATING FORMULATION was commercialized on 15.3.18 Project may be closed and completion report may be submitted.
4.	<p>NEW Mechanization in cotton cultivation (Preliminary study –URP No. Not obtained) Dr. N. Sakthivel Associate Professor Dr.D.Manohar Jesudas P & H, AMRC Dr.N.Premalatha, Assistant Professor Department of Cotton</p>	<ul style="list-style-type: none"> Use of machinery for sowing, inter cultural operation, spraying with boom sprayer and drip fertigation recorded a yield of 2212 kg /ha with a labour saving of 76 man days Since mechanical harvester is not available at present, the proposal may be submitted by ARS, Kovilpatti after purchasing the mechanical harvester. Project no. may be obtained

B. On Farm Trials (Proposed during CSM 2017)

S. No.	On Farm Trials (2017)	Remarks
1.	<p>Study on intercropping in rainfed cotton</p> <p>Treatment details: T1: Cotton T2: Cotton + Onion (Additive series) T3: Cotton + Amaranthus (Additive series)</p> <p>Observations to be recorded: a) No. of monopodial and symbodial branches b) Intercrop yield c) Yield components and yield d) Cotton Equivalent yield e) Land Equivalent Ratio (LER) f) Economics</p> <p>Centres CRS, Veppanthattai Dr. N. Meyyazhagan, Professor and Head ARS, Kovilpatti Dr. G.Sudhkar, Asst. Prof (Agronomy)</p>	<ul style="list-style-type: none"> The results revealed that cotton + onion intercropping system registered higher cotton equivalent yield (2608 kg/ha), net income (Rs 63359/ ha) and LER (1.09) than Cotton + amaranthus intercropping system. In future, horticulture scientists may be included as collaborative scientist. (Mean of two centres) <p>For adoption:</p> <ul style="list-style-type: none"> In rainfed cotton areas with supplemental irrigation facilities, for higher net income, onion as intercrop may be recommended.
2.	<p>Integrated Weed Management in Cotton</p> <p>Treatment details: T₁ PE- Pendimethalin @1.0 kg a.i./ha + HW 30 DAS T₂ PE- Pendimethalin @1.0 kg a.i./ha + EPOE - Quizalofop ethyl@ 50 g a.i./ha at 2 - 4 leaf stage + HW 45 DAS T₃ EPOE- Pyriithiobac sodium @ 62.5 g a.i./ha + Quizalofop ethyl@ 50 g a.i./ha at 2 - 4 leaf stage + HW 45 DAS</p> <p>Observations to be recorded: a. Weed dry matter and density b. No. of bolls per plant c. Bolls weight (g) d. Seed cotton yield (kg/ha) e. Economics</p> <p>Centres CRS, Srivilliputhur Dr. R. Veeraputhiran, Asst. Prof (Agronomy) ARS, Vaigaidam Dr. R. Jeyasrinivas, Asst. Prof (Agronomy) AC & RI, Madurai Dr. AnittaFanish, Asst. Prof (Agronomy)</p>	<ul style="list-style-type: none"> The three years results revealed that PE Pendimethalin @1.0 kg a.i./ha followed by EPOE Quizalofop ethyl @ 50 g a.i. at 2 - 4 leaf stage + HW 45 DAS recorded higher seed cotton yield (1862 kg/ha) and higher net return (Rs.36447/ha) (Mean of three centres) <p>For adoption</p> <ul style="list-style-type: none"> For obtaining higher seed cotton yield and net income under irrigated condition, application of PE Pendimethalin @1.0 kg a.i./ha followed by EPOE Quizalofop ethyl @ 50 g a.i. at 2 - 4 leaf stage + HW 45 DAS is recommended .

C. On Farm Trials (Proposed during CSM 2018)

S. No.	On Farm Trials (2018)	Remarks
1.	<p>Study on growth retardant and defoliant in cotton</p> <p>Centres</p> <p>CRS, Srivilliputtur (Lead centre) Dr. R. Veeraputhiran, Asst. Professor (Agronomy)</p> <p>Dept. of cotton Dr.N.Sakhivel (Assoc. Prof)</p> <p>CRS, Veppanthattai Dr. N. Meyyazhagan, Professor and Head</p> <p>ARS, Kovilpatti Dr. S.Subbulakshmi, Asst. Prof (Agronomy)</p>	<p>Treatment details:</p> <p>T₁: No spray</p> <p>T₂: Mepiquat chloride spray @ 50 g a.i/ha at square formation and boll development stage +. Tembotrione spray @ 200 ml/ha on 130 DAS</p> <p>Observations to be recorded:</p> <p>Plant height</p> <p>No. of monopodial and symbodial branches</p> <p>b. Symbodial length (cm)</p> <p>c. Boll weight (g)</p> <p>c. Seed cotton yield (kg/ha)</p> <p>d. Economics</p>

D. New Action plan proposals 2018 – 2021				
	Title	Scientists incharge	Duratio n	Remarks
1.	<p>Nutrient management for cotton under high density planting</p> <p>Genotypes</p> <ul style="list-style-type: none"> ❖ TCH 1705 (Central released var. as check) ❖ TCH 1819 (Pre release genotype) ❖ TCH 18 22 (Pre release genotype) <p>Nutrient management</p> <ul style="list-style-type: none"> ❖ RDF 100 % (80:40:40 kg NPK/ha) ❖ RDF 125 % (100:50:50 kg NPK/ha) ❖ RDF 150 % (120:60:60 kg NPK/ha) ❖ STCR recommendation with specific yield target. Common practices as per CPG <p>12.5 t/ha FYM, +15 Kg/ha MN Mixture as EFYM + Bio fertilizer (ST 600 g/ha) + Foliar spray TNAU Cotton plus @ 6.25 kg/ha twice</p> <p>Observations to be recorded</p> <p>Plant population</p> <p>Plant height (No.)</p> <p>No. monopodia</p> <p>Symbodial length (cm)</p> <p>No. of sympodia</p> <p>No. of bolls</p> <p>Boll weight (g)</p> <p>Seed cotton yield (kg/ha)</p> <p>Nutrient uptake (kg/ha)</p> <p>Economics</p> <p>Soil nutrient status (Pre and Post harvest)</p> <p>Quality parameters</p>	<p>Dept. of Cotton, Coimbatore (Lead Centre)</p> <p>Dr. N. Sakthivel Assoc. Professor (Agronomy)</p> <p>(Observations on growth and yield parameters, nutrient uptake, economics)</p> <p>Dr.K.M.Sellamuthu Assistant Professor (SS & AC)</p> <p>Department of SS & AC</p> <p>(Soil sampling and analysis, STCR equation for both Coimbatore and Srivilliputtur)</p> <p>Dr.N.Premalatha Asst. Prof (PBG)</p> <p>(Quality parameters)</p> <p>CRS, Srivilliputtur</p> <p>Dr. R. Veeraputhiran Asst. Professor (Agronomy)</p> <p>(Observations on growth and yield parameters, Nutrient uptake studies, economics)</p> <p>Dr.K.Thiyagu Asst. Prof (PBG)</p> <p>(Quality parameters)</p>	2018 – 2021	Proposal (Lead centre) may be submitted through proper channel to obtain URP number, separately by each centre.

2.	<p>Retaining of rice fallow cotton during <i>kuruvai</i> season in cauvery delta zone under delayed water release situation</p> <p>Crop establishment Sowing with tillage Sowing without tillage</p> <p>Irrigation Irrigation upto 135 DAS Irrigation upto 150 DAS Irrigation upto 165 DAS Irrigation upto 180 DAS</p> <p>Common practice Line sowing (100 x 100 cm), Additional 25 % N & K on 135 DAS for extending the crop, Hybrid / Variety</p> <p>Observations to be recorded Germination percentage Final plant population Plant height (cm) No. of monopodia No. of sympodia No. of bolls Boll weight (g) Seed cotton yield (kg/ha) Man days /ha Economics</p>	<p>TRRI, Aduthurai (Lead Centre) Dr. K.Raju Assoc.Professor (Agronomy)</p> <p>SWMRI, Thanjavur Dr. S.Porpavai, Professor and Head</p>	2018 – 2021	Proposal (Lead centre) may be submitted through proper channel to obtain URP number, separately by each centre.
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Remarks by Vice Chancellor: All trials with foliar spray with respect to crop management may be allotted to CRS, Veppanthattai.

CROP PROTECTION

List of URP/AICRP/ERP

Crop	Centre		URP	AICRP	EFP	Total
Cotton	Coimbatore	Entomology	-	1	-	1
		Pathology	1	1	-	2
	Srivilliputtur	Entomology	1	1	-	2
		Pathology				
	Kovilpatti	Entomology	2	-	-	2
		Pathology	-	-	-	-

A. Remarks on the ongoing University Research Projects

1. Agri. Entomology

S. No.	Project Number and Title	Remarks
1.	<p>CPPS / CBE / ENT / COT / 2016 / 001 Strategies for enhancing quality and productivity of organic cotton. (Jun.16 –May.19) Dr. K. Ganesan Asst. Professor (Ento.) Coimbatore</p>	<p>The project number, title and treatment details do not match with crop protection perspectives. The role of scientists from other disciplines has not been clearly indicated. Hence, it is suggested to send a closure proposal immediately. In consultation with the P&H (AEN), TNAU, Coimbatore, a new URP with scientifically validated organic inputs for cotton pest management may be proposed on or before 15.06.2018 and sent for CPPS-RPAC remarks. As per general norms, the URP should be operated by a single PI.</p> <p>In case, if herbal products and their combinations are to be used, basic studies on compatibility, phytotoxicity and mode of action should be well documented.</p>
2.	<p>CPPS/SVR/ENT/COT/2016/001 Population dynamics and management of pink bollworm <i>Pectinophora gossypiella</i> (Saunders) in upland cotton. (Aug.16 –Jul.19) Mr. K. Sasikumar Asst. Professor (Ento.) Srivilliputtur</p>	<p>As pink bollworm threat assumes major proportion in the state, all efforts may be made to monitor and develop management strategies for upland cotton in southern districts as discussed during pre-review. The project may be continued.</p>

3.	CPPS/KPT/AEN/COT/2013/001* Ecology and management of leafhopper <i>Amrasca biguttula biguttula</i> (Ishida) in cotton ecosystem. (Aug.13 –Sep.17) Dr. P. Anandhi Professor (Ento.), Kovilpatti (Transferred to TRRI, Aduthurai)	The reasons for not submitting the completion report may be explained. The scientist is advised to submit the closure proposal on or before 31.05.18.
4.	CPPS/KPT/AEN/COT/2014/002* Development of Integrated Pest Management Strategies for the management of cotton stem weevil, <i>Pempherulus affinis</i> (Faust) (Aug.14 –Sep.17) Dr. P. Anandhi , Professor (Ento.) Kovilpatti (Transferred to TRRI, Aduthurai)	The reasons for not submitting the completion report may be explained. The scientist is advised to submit the closure proposal on or before 31.05.18.

AICRP Projects

1.	AICRP/ PBG/ CBE/ COT/ 023 (Entomology part) Dr. K. Senguttuvan Asst. Professor (Ento.) Coimbatore	The project may be continued as per the technical programme of AICRP.
2.	AICRP/ PBG/ SVR/ COT/ 024 (Entomology part) Dr. K. Sasikumar Asst. Professor (Ento.) Srivilliputtur	

2. Plant Pathology - University Research Projects

S. No.	Project Number and Title	Remarks
1.	CPPS/SVP/PAT/COT/2016/001 Management strategies for diseases of cotton under high density planting system. (Aug.16 – Jul.19) Dr.R.Vimala Professor and Head, Srivilliputtur	Project may be continued.
2.	New Project – RPAC approved Development of bio intensive management module for wilt and root rot in cotton Dr.P.Latha Asst. Professor (Pl.Path.) Coimbatore	As wilt and root rot has been observed to be less than 10% in this zone for the past three years, this project is recommended for deletion. The scientist has been advised to propose a new URP on the theme area of research identified.

* **Submit completion report**

B. Action Plan for 2018-2019

ENTOMOLOGY

Theme No. 1		Survey and monitoring of pests (insects / mite) of cotton		
Theme Leader		Dr. K. Senguttuvan, Assistant Professor (Entomology), Department of Cotton, TNAU, Coimbatore		
S. No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
1.	Survey and surveillance for sucking pests, leaf feeders, stem weevil, boll worms, mites and correlating with weekly weather parameters.	Dr. K. Senguttuvan Assistant Professor (Entomology) Coimbatore	Survey and surveillance for sucking pests, leaf feeders, stem weevil, boll worms (specific attention to Pink boll worm), mites and correlating with weekly weather parameters Districts : Coimbatore, Tiruppur, Salem, Perambalur, Erode, Krishnagiri, Dharmapuri and Vellore	<ul style="list-style-type: none"> • Timely forecast
2.	Survey and surveillance for sucking pests, leaf feeders, stem weevil, boll worms, mites and correlating with weekly weather parameters.	Mr. K. Sasikumar Assistant Professor (Entomology) Srivilliputtur	Survey and surveillance for sucking pests, leaf feeders, stem weevil, boll worms (specific attention to Stem weevil), mites and correlating with weekly weather parameters Districts : Virudhunagar, Ramnad, Tirunelveli, Tuticorin, Madurai and Theni	<ul style="list-style-type: none"> • Timely forecast

Theme No. 2	Identification of resistant sources under PYT, AVT and MLT under natural /artificial screening			
Theme Leader	Mr. K. Sasikumar , Assistant Professor (Entomology), CRS, Srivilliputtur			
S. No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
1.	Preliminary screening under natural condition and advanced screening under artificial condition for key insect pests of cotton	Dr. K. Senguttuvan Assistant Professor (Entomology) Coimbatore	TSH 332, TCH 1199 (LH)	<ul style="list-style-type: none"> Identified resistant entries through preliminary / advanced screening will be forwarded to breeders.
2.	Preliminary screening under natural condition and advanced screening under artificial condition for key insect pests of cotton	Mr. K. Sasikumar Assistant Professor (Entomology) Srivilliputtur	TSH 330 (LH)	

Theme No. 3		Evaluation of pink bollworm management package.		
Theme Leader		Dr. K. Senguttuvan, Assistant Professor (Entomology), Department of Cotton, Coimbatore		
S.No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
1.	<ul style="list-style-type: none"> ➤ Timely sowing of treated seeds (Mid of August) ➤ Refugia maintenance (95:5 - Bt : Non Bt) ➤ Installation of pheromone traps @ 12/ha at 40 DAS ➤ Field release of <i>Trichogramma bactriae</i> @ 1.5 lakh ha⁻¹ (Thrice at weekly intervals from 45 DAS) ➤ Need based application of Profenophos 50% EC 1000 g.ai ha⁻¹ ➤ Shredding and safe disposal of cotton stalks immediately after final picking. 	<p>Dr. K. Senguttuvan Assistant Professor (Entomology) Coimbatore</p> <hr/> <p>Mr. K. Sasikumar Assistant Professor (Entomology) Srivilliputtur</p>	Validating the set of treatments to develop a module for management of pink bollworm through observation on incidence of rosette flowers and green bolls damage at weekly interval and per cent locule damage at harvest and calculating C:B ratio.	<ul style="list-style-type: none"> • Pink Bollworm Management module

PATHOLOGY

Theme No. 1		Survey and monitoring of pests (diseases) of cotton		
Theme Leader		Dr. P. Latha, Assistant Professor (Pathology), Department of Cotton, Coimbatore		
S.No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
1.	Survey and surveillance for foliar and soil borne diseases and correlating with weekly weather parameters.	Dr. R. Vimala Professor (Pathology) and Head, Srivilliputtur	Survey and surveillance for foliar and soil borne diseases (specific attention to TSV / RR) and correlating with weekly weather parameters Districts : Virudhunagar, Ramnad, Tirunelveli, Tuticorin, Madurai and Theni	<ul style="list-style-type: none"> • Timely forecast
2	Survey and surveillance for foliar and soil borne diseases and correlating with weekly weather parameters.	Dr. P. Latha Assistant Professor (Pathology) Coimbatore	Survey and surveillance for foliar and soil borne diseases (specific attention to TSV) and correlating with weekly weather parameters Districts : Coimbatore, Tiruppur, Salem, Perambalur, Erode, Krishnagiri, Dharmapuri and Vellore	<ul style="list-style-type: none"> • Timely forecast

Theme No. 2	Identification of resistant sources under PYT, AVT and MLT under natural /artificial screening			
Theme Leader	Dr. R. Vimala, Professor (Pathology) and Head, CRS, Srivilliputtur			
S.No	Activity	Name of the scientist and centre	Year 2018-19	Deliverables/ expected out come
1.	Preliminary screening under natural condition and advanced screening under artificial condition for key diseases of cotton	Dr. R. Vimala Professor (Pathology) and Head, Srivilliputtur	TSH 332, TCH 1199 (RR)	<ul style="list-style-type: none"> Identified resistant entries through preliminary / advanced screenings will be forwarded to breeders.
2.	Preliminary screening under natural condition and advanced screening under artificial condition for key diseases of cotton	Dr. P. Latha Assistant Professor (Pathology) Coimbatore	TSH 332, TCH 1199 (ALB)	

C. General Remarks

- Any new URP proposals related to plant protection is to be presented before the RPAC convened by the Director (CPPS) before getting final approval.
- All survey and surveillance data on pests and diseases should be recorded along with GPS co-ordinates.
- Enough samples should be collected to record the observations related to grading or per cent incidence / infection.
- All the plant protection scientists should join together to record the pest/disease incidence/intensity. Specific attention may be given to record vector population in case of virus diseases.
- As Pink boll worm is an emerging problem, serious attention may be given to study the life cycle of pink boll worm to fix the critical stage of its infestation for developing IPM module (All plant protection scientists).
- Constant vigil is required to monitor TSV infection. Varietal / Hybrid reaction or environmental factors that predispose the spread need to be clearly documented (Dr. R. Vimala, Professor and Head, CRS, Srivilliputtur).
- Pest and diseases complex in Desi and Bt cotton varieties /hybrids may be documented both at SVPR and Coimbatore centre.
- In all high density planting / defoliator sprayed plots maintained by Crop Production scientists, the pest and disease incidence may be recorded.
- A new URP may be submitted to study Pink boll worm biology in order to fix the critical stage of insect larvae which causes more damage (Dr. K.Senguttuvan, AP (Agrl. Entomology)).
- In the pink bollworm management trial, use of thuricides and egg parasitoids may be test verified (Dr. K.Senguttuvan, AP (Agrl. Entomology)).
- A new URP may be submitted to study the life cycle of stem weevil and its role in inducing root rot (Dr. K. Sasikumar, AP (Agrl. Entomology) & Dr.R.Vimala, Professor and Head, CRS, Srivilliputtur).
- Field visit can be arranged during October 2018 to inspect the performance of MLT/OFT/ART cultures by all Technical Directors (Director, CPBG)
- Submission of URP completion report along with RPAC remarks for final approval on time (Technical Directors/Deans/DR)
- Large scale 5 to 10 acres continues area demonstration of latest/newly released TNAU varieties may be arranged for easy visit by farmers, extension and department officials
- Steps may be taken to establish crop cafeteria in all research stations with latest released varieties and crops of local importance (All Research Stations)

Work load of each scientist (Theme wise)

Theme 1: Characterization of genotypes

Theme 2: Developing long and extra long staple cotton genotypes

Theme 3: Developing superior medium staple cotton genotypes

Theme 4: Developing genotypes with short duration and compactness for HDPS and rice fallow

Theme 5: Improvement of *G. arboreum* genotypes

Theme 6: Development of *Bt* cotton varieties

Theme7: Studies on floral biology and pollination mechanism to develop efficient genotypes in Sunnhemp

Sl. No.	Name of the scientist	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7	Other responsibilities (AICRP/Teaching ODL/ Farm management/ Administration)	
(man hours / week)										
Crop Improvement										
1	M. Kumar	10	16						14	
2	P. Amala balu	5	10						25	
3	L. Mahalingam	Breeder seed unit								40
4	S. Sivakumar		20						20	
5	N. Premalatha	10			10		5		15	
6	M. Gnanasekaran			20					20	
7	K. Thiyagu	5			15				20	
8	K. Bharathi Kumar				15				25	
9	K. Hari ramakrishnan			5		20			15	
10	R.Puspha							10	30	
Crop Management										
1	N. Meyyazhagan				10				30	
2	N. Sakthivel		5		15				20	
3	R. Veeraputhiran				20				20	
Crop Protection										
1	R. Vimala	5	5						30	
2	K. Senguttuvan	10	6	8					16	
3	K. Sasikumar	6	6	6					22	
4	P. Latha	5	5						30	

WORK LOAD OF COTTON SCIENTISTS FOR THE YEAR 2018-19

S. No.	Scientists	% of time
1.	M. Kumar	
	URP - 2	20
	Teaching	15
	Students guidance	15
	Administration	35
	Other Activities	15
2.	P. Amala balu	
	URP -1	20
	AICRP	40
	Teaching	20
	Students guidance	15
	Other Activities	5
3.	L. Mahalingam	
	Breeder seed (Full time)	55
	Teaching	15
	Students guidance	15
	Other Activities	15
4.	S. Sivakumar	
	URP -1	25
	AICRP	25
	Other Crop (Maize)	25
	Other Activities	25
5.	N. Meyyazhagan	
	URP -1	20
	Administration	50
	Other Activities	30
6.	R. Vimala	
	URP -1	30
	Administration	40
	Other Activities	30
7.	N. Sakthivel	
	AICRP	40
	Teaching	20
	Other Activities (farm)	40
8.	N. Premalatha	
	URP -2	40
	Ext. Funded Projects	30
	Teaching	20
	Other Activities	10

S.No.	Scientists	% of time
9.	M. Gnanasekaran	
	URP -1	30
	AICRP	40
	Other Activities	30
10.	K. Thiyagu	
	URP -2	40
	AICRP	40
	Other Activities (farm)	20
11.	K. Bharathi Kumar	
	URP -1	40
	AICRP	20
	Other Activities (farm)	40
12.	K. Hari ramakrishnan	
	URP -2	40
	AICRP	20
	Teaching	20
	Other Activities	20
13.	R. Veeraputhiran	
	URP -1	25
	AICRP	25
	Other Activities	50
14.	K. Senguttuvan	
	Univ. Sub Project-1	25
	AICRP	25
	Teaching	20
	Other Activities (farm)	30
15.	K. Sasikumar	
	URP -1	25
	AICRP	25
	Other Activities	50
16.	P. Latha	
	URP -1	20
	AICRP	35
	Teaching	30
	Other Activities (VCs- Mushroom)	15

Work load of Cotton Scientists- Action plan of Crop Improvement (Cotton)

THEMES 1	Characterization of genotypes	
	1a	Pre breeding materials development and utilization of wild relatives for exploiting HPR
	1b	Evaluation, characterization and documentation of cotton germplasm
THEMES 2	Developing long and extra long staple cotton varieties	
	2a	Evaluation of segregating materials
	2b	Identification of promising cultures and yield evaluation at station trials
	2c	Screening of advanced culture for pest and diseases
	2d	Advancement of promising entries to MLT/AICCIP
	2e	Conducting OFT/ FLD
THEMES 3	Development of high yielding medium staple cotton varieties (<i>G.hirsutum</i> L.) resistant to leaf hopper	
	3a	Synthesizing new crosses and evaluation of segregating materials
	3b	Identification of promising cultures and yield evaluation at station trials
	3c	Screening of advanced culture for pest and diseases
	3d	Advancement of promising entries to MLT/AICCIP
	3e	Conducting ART and Submission of release proposal
THEMES 4	Development of compact and short duration cotton genotypes (<i>G. hirsutum</i>) suitable for HDPS and rice fallow	
	4a	Evaluation of advanced breeding lines to identify stable genotypes under rainfed and irrigated conditions
	4b	Selection of genotypes and synthesizing new cross
	4c	Optimization of spacing and fertilizer requirement for TCH 1819 and other compact cultures under HDPS
	4d	Developing suitable Integrated Pest and Disease Management (IPDM) module for HDPS
	4e	Management of plant geometry through growth retardants under HDPS
THEMES 5	Development of diploid cotton (<i>G. 32arboreum</i>) with high yield and fibre length as well as suitable for surgical purpose	
	5a	Selection of genotypes and synthesizing of new cross and evaluation of segregating materials

Theme 6	Development of <i>Bt</i> Cotton varieties	
	6a	Standardizing embryogenic calli induction and regeneration protocol for Coker and TNAU varieties
	6b	<i>Bt</i> construct development using native genes
	6c	Field evaluation of available backcross populations
Theme 7	Studies on floral biology and pollination mechanism to develop efficient genotypes in Sunnhemp	
	7a	Evaluation of germplasm and identifying elite genotypes
	7b	Understanding anthesis and reproductive biology
	7c	Identifying genotypes with higher biomass and using them in crossing programme

Work load of Cotton Scientists- Action plan of Crop Improvement (Cotton)

Scientists	Titles	Theme	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	% time	
Dr.M. Kumar, Professor and Head , Department of Cotton, TNAU, Coimbatore																
URP	CPBG/CBE/PBG/COT/2017/001 CPBG/ CBE/ PBG/ COT/ 016/002	1 & 2	<-----Winter trials----->						Summer Trials, Reporting						20	
Teaching	PG & Ph.D.		<-----PG & Ph.D. teaching ----->													15
Students guide	PG & Ph.D.		<----- PG & Ph.D. guidance----->													15
Administration			<-----Administration----->													35
Other			<----- Other responsibilities ----->													15
Dr. P. Amala Balu, Professor, Department of Cotton, TNAU, Coimbatore																
URP	CPBG/CBE/PBG/COT/2016/003	1	<-----Winter trials----->						Summer Trials, Reporting						20	
AICRP	AICRP/ PBG/ CBE/ COT/023		<-----Winter trials----->												40	
Teaching	PG & Ph.D.		<-----PG & Ph.D. teaching ----->													20
Students guide	PG & Ph.D.		<----- PG & Ph.D. guidance----->													15
Others			<----- Other responsibilities ----->													5
Dr. L. Mahalingam, Professor, Department of Cotton, TNAU, Coimbatore																
Breeder seed	Breeder seed unit								Breeder seed						55	
Teaching	PG & Ph.D.		<-----PG & Ph.D. teaching ----->													15
Students guide	PG & Ph.D.		<----- PG & Ph.D. guidance----->													15
Others			<----- Other responsibilities ----->													15
Dr. S. Sivakumar, Professor, Cotton Research Station, Veppanthattai																
URP	CPBG/VPT/PBG/COT/2016/002	2	<-----Winter trials----->						Summer Trials, Reporting						25	
AICRP	Voluntary Centre		<-----Winter trials----->												25	
Other crop (Maize)			<----- Other responsibilities ----->													25
Others																25

Dr. N. Premalatha, Assistant Professor, Department of Cotton, TNAU, Coimbatore					
URP	CPBG/CBE/PBG/COT/2012/004	4	<-----Winter trials----->	Summer Trials, Reporting	20
	CPBG/CBE/PBG/COT/2016/001	1	<-----Winter trials----->	Reporting	20
EPF	DBT/CPBG/CBE/COT/2017/R004	2	<-----Winter trials----->	Summer Trials, Reporting	20
Teaching	UG & PG teaching		<----- UG & PG teaching ----->		30
Others			<----- Other responsibilities ----->		10
Dr. M. Gnanasekaran, Assistant Professor, Cotton Research Station, Srivilliputtur					
URP	CPBG/SVP/PBG/COT/2016/002	3	<-----Winter trials----->	Summer Trials, Reporting	30
AICRP	AICRP/ PBG/ SVPR/ COT/023		<-----Winter trials----->		40
Others			<----- Other responsibilities ----->		30
Dr. K. Thiyagu, Assistant Professor, Cotton Research Station, Srivilliputtur					
URP	CPBG/SVP/PBG/COT/2016/001	4	<-----Winter trials----->	Summer Trials, Reporting	20
	CPBG/SVP/PBG/COT/2015/004	1	<-----Winter trials----->	Summer Trials, Reporting	20
AICRP	AICRP/ PBG/ SVPR/ COT/023		<-----Winter trials----->		40
Others	Farm Management		<----- Other responsibilities ----->		20
Dr. K. Bharathikumar, Assistant Professor, Cotton Research Station, Veppanthattai					
URP	CPBG/VPT/PBG/COT/2015/001	4	<-----Winter trials----->	Summer Trials, Reporting	40
AICRP	Voluntary centre		<-----Winter trials----->		20
Others	Farm Management		<----- Other responsibilities ----->		40
Dr. K. Hariramakrishnan, Assistant Professor, Agricultural Research Station, Kovilpatti					
URP	CPBG/KPT/PBG/COT/2015/006	3	<-----Winter trials----->		20
	CPBG/KPT/PBG/COT/2015/007	5	<-----Winter trials----->		20
AICRP	Voluntary centre		<-----Winter trials----->		20
Teaching	ODL & Diploma		<----- ODL ----->		20
Others			<----- Other responsibilities ----->		20

Crop Management

Scientists	Titles	The me	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	% time
Dr. N. Meyyazhagan, Professor and Head, CRS, Veppanthattai															
URP	DCM/KPT/AGR/COT/2016/001	1	<-----Winter trials----->						Summer Trials, Reporting						25
Administration															50
Other			<----- Other responsibilities ----->												25
Dr. N.Sakthivel, Assoc. Professor, Department of Cotton, TNAU, Coimbatore															
URP	New Project	1	<-----Winter trials----->						Summer Trials, Reporting						20
AICRP	AICRP/ PBG/ CBE/ COT/023	1													40
Teaching	UG & PG		<----- UG & PG teaching ----->												25
Others	Farm superintendent		<----- Other responsibilities ----->												15
Dr. R. Veeraputhiran, Cotton Research Station, Srivilliputtur															
URP	DCM/SVPR/AGR/COT/2016/001	1	<-----Winter trials----->						Summer Trials, Reporting						25
AICRP	AICRP/ PBG/ SVR/ COT/024														50
Others			<----- Other responsibilities ----->												25

Crop Protection

Scientists	Titles	Theme	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	% time	
Dr. K. Senguttuvan, Asst. Professor, Department of Cotton, TNAU, Coimbatore																
URP	New Project	1	<-----Rabi trials----->						Reporting						25	
AICRP	AICRP/ PBG/ CBE/ COT/023															25
Teaching	UG		<----- UG teaching----->													20
Others	Farm manager / Insect museum		<----- Other responsibilities ----->													30
Dr. K. Sasikumar, Asst. Professor, Department of Cotton, TNAU, Coimbatore																
URP	CPPS/SVR/ENT/COT/2016/001	1	<-----Rabi trials----->						Reporting						25	
AICRP	AICRP/ PBG/ SVR/ COT/024	1														50
Others			<----- Other responsibilities ----->													25
Dr. R. Vimala, Professor and Head, Cotton Research Station, Srivilliputtur																
URP	CPPS/SVP/PAT/COT/2016/001	1	<-----Rabi trials----->						Reporting						25	
Administration																50
Others			<----- Other responsibilities ----->													25
Dr. P. Latha, Asst. Professor, Department of Cotton, TNAU, Coimbatore																
URP	New Project	1	<-----Rabi trials----->						Reporting						20	
AICRP	AICRP/ PBG/ CBE/ COT/023	1														35
Teaching	UG, PG & ODL		<----- UG, PG & ODL teaching ----->													30
Others (VCS-Mushroom)	One day and Five days mushroom training programme		<----- Other responsibilities ----->													15

URP-University Research Project; EFP-Externally Funded Project