<u>COTTON CROP IMPROVEMENT</u> Action plan for 2016-2019 on the identified themes

Theme	e No. 1	Characteriza	tion of genotypes				
Theme	e Leader	Dr. L. Mahal	ingam, Professor (PBG)				
S.No	A	ctivity	Name of the scientist and centre	Year 2016-17 Winter 2016	Year 2017-18 Winter 2017	Year 2018-19 Winter 2018	Deliverables/ expected out come
1.	Pre breeding materials development and utilization of wild relatives for exploiting HPR Evaluation,		Dr. L. Mahalingam, Prof. (PBG)	 Fresh crosses will be effected between the CO 14 cotton and <i>Gossypium sturtianum</i> and <i>Gossypium gossypiodes</i> wild species. Raising of F1 generation and pollen fertility study 	Raising of F ₂ population and selection of desirable segregants Quality studies and pest and diseases screening of entries	Forwarding of F ₂ - F ₃ generation	 Utilizing wild species for infusing pest and disease resistance Genotypes with good fibre quality and tolerance/ resistance to pest and diseases
2.		ization and tation of	Dr. N.Premalatha, AP (PBG)	Evaluation of 400 germplasm of <i>G. hirsutum</i> with 10 checks for characterization, documentation and for preparing a database in collaboration of PGR	Evaluation of another set of 400 germplasm of <i>G. hirsutum</i> with 10 checks for characterization, documentation and for preparing a database in collaboration of PGR	Evaluation of another 200 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	 Preparation of a document on 1000 <i>G. hirsutum</i> and 160 <i>G.barbadense</i> germplasm Making the key traits of available germplasm on line

Theme	e No. 2	Developing long and e	xtra	long staple cotton varieties	3				
Theme	e Leader	Dr. M. Kumar, Profess	or ai	nd Head (PBG), Dept. of Co	ottor	n, TNAU, Coimbatore			
S.No Activity		Name of the		Year 2016-17		Year 2017-18		Year 2018-19	Deliverables/
		scientist and centre		Winter 2016		Winter 2017		Winter 2018	expected out come
1	Evaluation of segregating materials	Dr. M. Kumar, Professor and Head Dept. of Cotton Coimbatore	AA	Identification of superior progenies from the <i>G. hirsutum</i> x <i>G. barbadense</i> (15 x 6 cross combinations) and <i>G. hirsutum</i> x <i>G.hirsutum</i> (4 x 15) already raised and due for harvest during July 2016 Raising of successful cross combinations during August 2016	A	Evaluation of segregating materials (F ₂ s) and selection of superior segregants for extra long fibre length and fibre strength.	A	Evaluation of segregating materials (F ₃ s) and selection of superior segregants (F ₃ s) for extra long fibre length and fibre strength.	Comparative evaluation of <i>G. hirsutum</i> x <i>G. barbadense</i> <i>and G.hirsutum</i> x <i>G. hirsutum</i> progenies for fibre quality parameters.
		Dr. S. Sivakumar, Professor (PBG) Veppanthattai	AA	Generation of new crosses Studies on the available segregating genotypes	A	Forwardal of identified recombinants.	A	Quality evaluation and forwardal recombinants.	Identifying superior recombinants.
2.	Identification of promising cultures and yield evaluation at	Professor and Head Dept. of Cotton Coimbatore	A	Study of different yield trials (PVT and AVT)	>	Study of different yield trials (PVT and AVT)	A	Seed production of promising cultures identified in AVT	Identifying promising recombinants.
	station trials	Dr. S. Sivakumar, Professor (PBG) Veppanthattai	A	Evaluation of F_2 in summer and F_3 in winter	A	Yield estimation of pipe line cultures in summer and winter	A	Yield estimation of pipe line cultures in summer and winter	

3.	Screening of advanced culture for pest and diseases	Dr. M. Kumar, Professor and Head Dept. of Cotton Coimbatore	Artificial screening of advanced elite cultures for pest & diseases	Artificial screening of advanced elite cultures for pest & diseases	Artificial screening of advanced elite cultures for pest & diseases	Identifying recombinants with superior fibre quality and pest and diseases resistance / tolerance.
4.	Advancement of promising entries to MLT/AICCIP	Dr. M. Kumar, Professor and Head Dept. of Cotton Coimbatore Dr. S. Sivakumar, Professor (PBG) Veppanthattai	MLT-Winter irrigated at CBE and SVPR MLT-Winter rainfed at VPT and KPT	MLT-Winter irrigated at CBE and SVPR MLT-Winter rainfed at VPT and KPT	MLT-Winter irrigated at CBE and SVPR MLT-Winter rainfed at VPT and KPT	Best types will be identified after assessing its performance at various locations.
5.	Conducting OFT/ FLD	Dr. M. Kumar, Professor and Head Dept. of Cotton Coimbatore	Liasioning with ginning mills on utilization of CO 14 lint through contract farming,	Promoting CO 14 through FLDs	Promoting CO 14 through FLDs	Popularization of CO 14 variety.

Ther	ne No. 3	Dev	velopment of high yield	ing medium st	aple cotton vai	rieties (<i>G.hirsutı</i>	um L.) resistan	t to leaf hopper	r		
Ther	ne Leader	Dr.I	M.Gnanasekaran, Assist	ant Professor ((PBG) , Cotton	Research Statio	n, Srivilliputtı	ır			
S.			Name of the	Year 2016-17		Year 2017-18		Year 2018-19		Deliverables	
5. No	Activity	and centre		Summer 2016	Winter 2016	Summer 2017	Winter 2017	Summer 2018	Winter 2018	/ expected out come	
1	Synthesizin new crosses and evaluat of segregati materials	tion	SVPR: Dr.M.Gnanasekaran, Asst. Prof. (PBG)	Study of segregating materials ($F_{2}s$, $F_{3}s$, $F_{4}s$, $F_{5}s$) and Evaluation of $F_{1}s$ and fixing the $F_{1}s$ for further studies	Effecting crossing among the high yielding and jassid resistant donors	Studying segregating materials $(F_{2}s, F_{3}s, F_{4}s, F_{5}s)$ and Evaluation of $F_{1}s$ and fixing the $F_{1}s$ for further studies	Effecting crossing among the high yielding and jassid resistant donors	Study of segregating materials $(F_{2}s, F_{3}s, F_{4}s, F_{5}s)$ and Evaluation $F_{1}s$ and fix the $F_{1}s$ for further studies	Effecting crossing among the high yielding and jassid resistant donors	Newer crosses synthesized for getting desirable recombinants	
2.	Identification of promisin cultures and yield evaluation a station trials	g d at	SVPR: Dr.M.Gnanasekaran, Asst. Prof. (PBG)	Studing different yield trials (RRYT, PVT, and AVT)	Seed production of promising cultures identified in AVT	Studying different yield trials (RRYT, PVT, and AVT)	Seed production of promising cultures identified in AVT. Artificial screening of advanced cultures against jassids	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 jassids tolerance.	

3.	Screening of	SVPR:	_	Artificial	_	Artificial	-	Artificial	Confirming
5.	advanced	Dr.K.Sasikumar	_	screening	_	screening	_	screening of	the tolerance
	culture for pest	Asst. Prof. (Ento)		of		of		advanced	/ resistance
	and diseases	Dr.R.Vimala,		advanced		advanced		elite	of better
	and diseases	Professor (Patho)		elite		elite		cultures for	performing
		Thessor (Taulo)		cultures for		cultures for		pest &	entires.
				pest &				diseases	entires.
				diseases		pest & diseases		uiseases	
4	A 1	SVPR:		MLT-	MLT-	MLT-	MLT-	MLT-Winter	I I and Color
4.	Advancement		-	Winter		Winter			Identifying
	of promising	Dr.M.Gnanasekaran,			Summer		Summer	irrigated at	promising
	entries to	Asst. Prof. (PBG)		irrigated at	irrigated at	irrigated at	irrigated at	CBE and	genotypes.
	MLT/AICCIP	CBE: Dr. N.		CBE and	CBE and	CBE and	CBE and	SVPR	
		Premalatha,		SVPR	SVPR	SVPR	SVPR	MLT-Winter	
		Asst. Prof. (PBG)		MLT-		MLT-		rainfed at	
		VPT:		Winter		Winter		VPT and	
		Dr.K.Bharathikumar		rainfed at		rainfed at		KPT	
		Asst. Prof. (PBG)		VPT and		VPT and			
		KPT:		KPT		KPT			
		Dr.S.Hariramakrish							
		nan,							
_		Asst. Prof. (PBG)	<u> </u>		D				
5.	Conducting	Dr.	Conducting	Obtaining	Proposal of	Submission	Repeating	Obtaining	Release of
	ART and	M.Gnanasekaran,	ART with	ART	TSH	of release	the ART	ART results	promising
	Submission of	Asst. Prof. (PBG)	TSH 0499	results for	324/TSH	proposal of	with TSH	for TSH	genotypes at
	release			TSH 0499	327 to ART	TSH 0499	324/TSH	324/TSH	National and
	proposal					to UTRSC/	327 to ART	327	State level.
				TSH	Submission	SVRC			
				04/115-	of release				
				evaluation	proposal of				
				in	TSH 04/115				
				Agronomic	to CVRC				
				requiremen					
				t in AICCIP					

Then	ne No. 4	Developmen	nt of compact cotton genotypes (G. h	<i>irsutum</i>) suitable for H	IDPS and Mechanica	l harvest	
Then	ne Leader	M. Gunasek	aran, Professor and Head, CRS, Sriv	illiputtur			
S. No.	Name of t	he Activity	Name of the scientist and centre	Year 2016-17	Year 2017-18	Year 2018-19	Deliverables
1	Evaluation of advanced breeding lines to identify stable genotypes under rainfed and irrigated conditions		 CBE: Dr. N. Premalatha, Asst. Prof. (PBG) SVPR: Dr. M. Gunasekaran, P&H VPT: Dr. K. Bharathikumar, Asst. Prof. (PBG), KPT: Dr. S. Hari Ramakrishnan, Asst. Prof. (PBG) 	Evaluation and short listing of genotypes for MLT	Evaluation and short listing of genotypes for MLT/ ART	Evaluation of promising genotypes in ART/ submission of release proposal	Submission of varietal identification proposal for the elite culture
2	Development of compact genotypes with short sympodia and tolerance to biotic and abiotic stress		CBE: Dr. N. Premalatha, Asst. Prof. (PBG) SVPR: Dr. M. Gunasekaran, P&H	Synthesis of new crosses and evaluation of F ₁ 's	Evaluation of F ₁ and F ₂ population and selection of superior segregants	Evaluation of promising segregants and identifying superior progenies.	Identification of superior progenies
3	Seed production of promising short sympodial genotypes to meet the requirement for MLT, ART and for large scale demontration		CBE: Dr. N. Premalatha, Asst. Prof. (PBG) SVPR: Dr. M. Gunasekaran, P&H	Seed production of promising genotypes: TCH1819 and TCH 1822	Seed production of promising genotypes: TCH1819 and TCH 1822	Seed production of promising genotypes: TCH1819 and TCH 1822 and submission of release proposal.	Seed production of promising genotypes: TCH1819 and TCH 1822
4	Optimization of spacing and fertilizer requirement for TCH 1819 under HDPS		SVPR: Dr. ChelviRameesh, Asst. Prof. (Agron) CBE : Dr. Subbalakshmi Lokanadhan, Prof. (Agon.)	Conducting field experiments (confirmation study)	Large scale field demonstration	Arriving at package of practices for TCH 1819 under HDPS	Recommendation of suitable spacing, fertilizer and including it is package of practices.

5	Developing suitable Integrated Pest and Disease Management (IPDM) module for HDPS	SVPR: Mr. K. Sasikumar, Asst. Prof. (Ento) Dr. R. Vimala, Prof. (Patho)	Field experiment on IPDM under HDPS	Confirmation experiment on IPDM under HDPS	Large scale demonstration of IPDM on HDPS	Recommendation of suitable IPDM for HDPS
6	Management of plant geometry through growth retardants under HDPS	SVPR: Dr. ChelviRameesh, Asst. Prof. (Agron)	Field experiment using growth retardant	Field experiment using growth retardant(Confir mation study)	Large scale field demonstration	Recommendation of suitable dose for adoption
7	On farm research cum demonstration of HDPS in farmer's field	 CBE: Dr. N. Premalatha, Asst. Prof. (PBG) SVPR: Dr. M. Gunasekaran, P&H VPT: Dr. K. Bharathikumar, Asst. Prof. (PBG), KPT: Dr. S. Hari Ramakrishnan, Asst. Prof. (PBG) 	Large scale demonstration of TCH1819 in the farmers field	Large scale demonstration of TCH1819 in the farmers field	Large scale demonstration of TCH1819 in the farmers field	Creating confidence among the farmers about the culture and its cultivation.
8	Demonstration of implements and machinery for mechanized cultivation	 CBE: Dr. N. Premalatha, Asst. Prof. (PBG) SVPR: Dr. M. Gunasekaran, P&H VPT: Dr. K. Bharathikumar, Asst. Prof. (PBG), KPT: Dr. S. Hari Ramakrishnan, Asst. Prof. (PBG) 	Demonstration of labour saving implements particularly for line sowing, weeding and earthing up etc	Demonstration of labour saving implements particularly for line sowing, weeding and earthing up etc	Demonstration of labour saving implements particularly for line sowing, weeding and earthing up etc	Large scale Popularisation and adoption of technology by cotton farmers particularly in rainfed situation

Theme No. 5 Theme Leader			-	(G.m. Saturi L	.) suitable for rice f	fallow cotton			
	e Leader	Dr.K.	Thiyagu, Assistant Pro	fessor (PBG) , Cotto	on Research S	Station, Srivilliputt	ur			
S.	1		Name of the scientist	Year 2016	6-17	Year 201	7-18	Year 2018	3-19	
5. No.	Activit	y	and centre	Winter 2016	Summer 2017	Winter 2017	Summer 2018	Winter 2018	Summer 2019	Deliverables
1 S	Selection of genotypes synthesizi of new cro	and ng	SVPR: Dr.K. Thiyagu, Asst. Prof. (PBG) CBE: Dr. P. Amala Balu, Professor (PBG)	Synthesis of new crosses among early duration (KC 2, KC 3, TCH 1705, TCH 1818, TCH 1819) with high yielding (MCU 5, MCU 12, MCU 13, TCH 1716, TCH 1608, SVPR 2, SVPR 4, TSH 0250, TSH 0499) genotypes Generation of new crosses with MCU 7, SVPR 3 and TCH 1819	-	Synthesis of new crosses among early duration (TCH 1820, TCH 1821, TKH 1185, G Cot 20, Suraj) with high yielding (MCU 5, MCU 12, MCU 13, TCH 1716, TCH 1608, SVPR 2, SVPR 4, TSH 0250, TSH 0499) genotypes Evaluation of segregating materials (F ₂ s) and selection of superior segregants for early entries	-	Synthesis of new crosses among early duration (SCS 793, SCS 1001, SCS 1062, GJHV 160 and TCH 484-7) with high yielding (MCU 5, MCU 12, MCU 13, TCH 1716, TCH 1608, SVPR 2, SVPR 4, TSH 0250, TSH 0499) genotypes Evaluation of segregating materials (F ₃ s) and selection of superior segregants (F ₃ s) for early	-	Identifying superior crosses and forwardal of progenies. Identifying better performing genotypes with lesser duration.

2.	Evaluation and selection F ₁ s for further advancement	SVPR: Dr.K. Thiyagu, Asst. Prof. (PBG)	-	Evaluation of synthesised F ₁ s for high yield and short duration and its	-	Evaluation of synthesised F ₁ s for high yield and short duration and its advancement	-	Evaluation of synthesised F ₁ s for high yield and short duration and its advancement	Selection of superior hybrid for further evaluation
3.	Evaluation of segregating materials	SVPR: Dr.K. Thiyagu, Asst. Prof. (PBG)	-	advancement -	-	Evaluation of segregating materials (F ₂ s) from the selected hybrid combinations	-	Evaluation of segregating materials (F ₂ s and F ₃ s) and Selection of superior segregants from F ₂ s for further advancement	Selection of superior segregants for further advancement

Then	ne No. 6	Develo	opment of diploid cotton (G. arbor	reum) with high yield and f	ibre length as well as su	itable for surgical purpos	е
Then	ne Leader	Dr.S. H	Iari Ramakrishnan, Assistant Pro	ofessor, ARS, Kovilpatty			
S. No.	Name of Activit		Name of the scientist and centre	Year 2016-17	Year 2017-18	Year 2018-19	Deliverables
1	Selection of genotypes and synthesizing of new cross		KPT: Dr. S. Hari Ramakrishnan, Asst. Prof. (PBG)	-	Selection of <i>G</i> . <i>arboreum</i> genotypes with high micronaire value and effecting crosses among the selected genotypes	Selection of <i>G</i> . <i>arboreum</i> genotypes with higher boll weight, fibre length and high micronaire and effecting crosses among the selected genotypes	Identifying crosses with higher mic & boll traits.
2	Evaluation and selection F ₁ s for further advancement		KPT: Dr. S. Hari Ramakrishnan, Asst. Prof. (PBG)	Evaluation of F ₁ s and selection of superior F ₁ s towards higher boll weight and fibre length for further studies	Evaluation of F ₁ s and selection of superior F ₁ s towards higher micronaire value for further studies	Evaluation of F ₁ s and selection of superior F ₁ s towards higher boll weight, fibre length and micronaire value for further progenies studies	Identifying crosses / genotypes with higher bolls and higher mic.
3	3 Evaluation of segregating materials		KPT: Dr. S. Hari Ramakrishnan, Asst. Prof. (PBG)	-	Evaluation of segregating materials (F ₂ s) and selection of superior segregants for higher boll weight and fibre length	Evaluation of segregating materials (F ₂ s) and selection of superior segregants (F ₃ s) for higher boll weight, fibre length and micronaire value	Identification of superior segregants

Department of Cotton, CPBG, TNAU, Coimbatore

This is prepared in common as most of the scientific research activities are coinciding with the start of cropping season (August 2016 to May 2017)

Activities	July 16 – September 16	October 16 - December 16	Jan 17 - March 17	April 17 – June 17
Preparatory works, seed ginning, acid delinting, dispatch of seeds	$\sqrt{\sqrt{\sqrt{2}}}$			
to ART and MLTs, field preparation for taking up URP (7 trials)				
and ICAR AICRP trials (25 numbers: 6 in PBG; 5 in Agronomy; 8 in				
Entomology and 6 in Pathology) and student trials				
		alalalal	$\sqrt{\sqrt{\sqrt{2}}}$	
Field observations		$\sqrt{\sqrt{\sqrt{1}}}$	~ ~ ~ ~	
Fibre quality analysis of all the trials				$\sqrt{\sqrt{\sqrt{2}}}$
Identification of field locations to take up rice fallow trials in the		$\sqrt{\sqrt{\sqrt{2}}}$		
CDZ				
Preparation of seed material for taking up rice fallow trials		$\sqrt{\sqrt{\sqrt{2}}}$		
Laying out rice fallow experiments at identified locations (A			$\sqrt{\sqrt{\sqrt{2}}}$	
minimum of 90 trials with TCH 1819 and TCH 1822 cultures)				
Organizing field demonstrations under Tamil Nadu Cotton			$\sqrt{\sqrt{\sqrt{2}}}$	
Cultivation Mission Project (TNCCM)				
Pests and Diseases monitoring	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	$\sqrt{\sqrt{\sqrt{2}}}$	
ICAR AICRP workshop participation during April – May 2017				$\sqrt{\sqrt{\sqrt{2}}}$
Crop Scientists' Meet 2017 of the University and proposing TCH				$\sqrt{\sqrt{\sqrt{2}}}$
1819 culture for release during 2018				

Cotton Research Station, Srivilliputtur

This is prepared in common as most of the scientific research activities are coinciding with the start of cropping season (Aug 16 - May 17)

(Aug.16 – May 1 Activities	Apr. 16 – June 16	July 16 – Sep. 16	Oct. 16 - Dec. 16	Jan. 17 - Mar. 17	Apr. 17 - June 17
Report preparation and Attending Annual meeting on AICCIP 2016 and CSM 2016; Physical Verification of stocks (2016)	$\sqrt{\sqrt{\sqrt{1}}}$				
Lay out of OFT on Integrated Weed Management in cotton; NADP – Micro irrigation - Third party inspection	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$			
Dispatch of seeds to MLTs, Fibre quality analysis for URP (Summer 2016) and AICCIP (Winter 2016-17) trials, Preparation of sowing materials for winter 2016-17 (AICCIP, Crossing materials for URP, Breeder seed production and Seed production of elite culture), Sowing, Cultivation and Management practices for good crop stand, Evaluation and data collection in experimental trials, Preparation and submission of variety release proposal - TSH 04/115 to AICCIP workshop and TSH 0499 to SVRC, Report preparation and Attending Annual meeting on AICCIP 2017 and CSM 2017 and Physical Verification of stocks (2017)	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$
Large scale demonstration cum research trials under TNCCM scheme using TCH 1819 compact culture – Selection of farmer's field, lay out, purchase of inputs and distribution, field visit, conducting of field day, report preparation and submission		$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{\sqrt{2}}}$
FLD and TSP (ICAR) - Administrative and Financial sanction, Selection of farmers, purchase of critical inputs and distribution to the farmers, organizing trainings and reporting	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{1}}$	$\sqrt{\sqrt{1}}$	$\sqrt{\sqrt{1}}$	
Preparation of sowing materials for Summer 2017 (Evaluation of F ₁ s segregating materials, Agronomic practices for elite cultures, Screening for pest and disease management practices), Sowing, Management practices for good crop stand, Evaluation and data collection in experimental trials and Fibre quality analysis for URP (Summer 2017)				~~~~	~~~
Plant Clinic Center activities	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$

Pests and Diseases monitoring	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$	$\sqrt{\sqrt{\sqrt{2}}}$
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Activities	July 16 - September 16	October 16 - December 16	January 17 - March 17	April 17 – June 17
1. Land preparation, ginning of				
seed materials, field layout				
and taking up sowing. URP -				
Plant Breeding –				
Agronomy -5	$\sqrt{\sqrt{2}}$			
Plant Pathology – 2				
Externally -				
Schemes/Project				
Plant Breeding – 2				
Agronomy – 2				
MLT – Plant Breeding				
OFT - SS&AC - 1				
2.Field observation				
Growth characters,		$\sqrt{\sqrt{N}}$		
Yield attributes				
3. Estimation of yield / Fibre quality analysis			$\sqrt{\sqrt{\sqrt{1}}}$	
4. Analysis of data, Report				
preparation for pre-review,				
Crop Scientist				$\sqrt{\sqrt{2}}$
Meet/AICCIP workshop.				
5.Organizing Field				
demonstration - TNCCM	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$	$\sqrt{\sqrt{2}}$
scheme, Monitoring, Report	* * *	v v v	V V V	v v v
preparation				

Scientist and his/ her Designation	Present work load	Proposed work schedule during 2016-17
M. Kumar, Professor and Head	 Coordinating the activities of the Department of Cotton 	Identified as Team leader for carrying research on long and extra long staple cotton development
	 Offering PGR 611 Conservation Genetics 2+1 course to PGR students 	Activities to be undertaken:
	 Guiding two M.Sc.(Ag.) scholars and two Ph. D. Scholars. 	Identification of superior progenies from the <i>G. hirsutum</i> x <i>G. barbadense</i> (15 x 6 cross combinations) already raised and due for harvest during July 2016
		Raising of successful cross combinations during August 2016
		Coordinating the activities of the Department especially in the lines of wild species collection and characterization, cytogenetic studies utilizing the wild species, promotion of TCH 1819 compact cotton culture in the delta districts during rice fallow situation, liasioning with ginning mills on utilization of CO 14 lint through contract farming, strengthening the infrastructure of the Department through purchase of High volume instrument, one power tiller, farm accessories etc.

Department of Cotton, CPBG, TNAU, Coimbatore

P. Amala Balu	1. Research	Activities to be undertaken:
P. Amala Balu Professor (PBG)	 Conducting All India Coordinated Cotton Improvement project (AICCIP) trials 2. Teaching Course Teacher for three courses I M.Sc. (Ag.) - GPB 609 Breeding Fibre and Sugar crops (1+1) I M.Sc. (Ag.) - PGR 608 Utilization of Plant Genetic resources through classical approaches (2+1) I Ph.D. (Ag.) - GPB 806 Breeding for stress (2+1) Chairperson for three students Mr. ISONG II Ph.D Generation Mean Analysis and molecular studies in cotton inter-specific crosses. Miss. Nandini II M.Sc. (Ag.) - Genetic analysis in cotton Miss. Abirami I M.Sc. (Ag.) - Diversity studies in Cotton 	 Activities to be undertaken: Conducting six AICCIP trials allotted for the year 2016-17 (6 trials) Seed production of cotton CO 14 to distribute farmers and also for conducting FLD and OFT trials. Popularization of Cotton CO14 through FLD and OFT Conducting MLT for the year 2016-17 Identifying promising culture for hybridization programme. Conducting AYT and PYT trials and evaluating entries for high yield and good fibre quality. Handling allotted PG and Ph.D., courses. Guiding the students for the completion of their thesis work
	 3. Extension Involved in conducting FLD for popularizing Cotton CO 14. 	

L. Mahalingam,	1.Research	Nucleus Seed Production :
Professor (PB&G)		Period: August 16 – February 17
	 Lists of university sub projects - Two 1. Maintenance and production of nucleus and breeder seeds of cotton varieties of department of cotton, Coimbatore 2. Development of bollworm resistant of cotton varieties by introgression of genes from wild relatives. 2. Teaching > Offering one M.Sc. (Ag.) course: PGR 607 Principles and practices of germpalsm characterization and documentation (2+1) to PGR students. 3. Chairperson for two students 1. P.Ramakrishnan II Ph.D. – Marker assisted backcross breeding for the improvement of 	 Raising of plant to row progeny from selected selfed plants confirming to the standards The nucleus seed production plot will be critically observed for all the morphological characters during different growth periods. If any plant is found to be deviant at any stage in plant to row for any character, the whole progeny row will be deleted The selected plants will be individually observed for various distinguishing morphological characters. Mean and standard deviation for kapas yield will be worked out. The kapas will be pooled from progeny row which lie within the mean ± 2 SE and will be used for raising of breeder seed production.
	foliar diseases in groundnut.	Breeder seed production
	2. K.Manonmani I M.Sc. (Ag.) - Studies on	Period: August 16 – February 17
	combining ability and heterosis in <i>hirsutum</i> cotton.	Raising of breeder seed crop by using the nucleus seeds already produced
	 4. Additional Responsibilities ➢ Co-ordinating the farm activities as Farm Superintendent. 	 Removal of off types, if any Selection of 100-200 single plants based on morphological identity Harvesting of breeder seed crop separately and distribution of breeder seeds based on target and indent Harvesting selected single plants separately and preserving the kapas for evaluation and maintaining the nucleus seed during

next year.
Period: June 16 – August 16: Effecting crosses
 Period: August 16 - February 17: Raising of crossed progenies. Fresh crosses will be effected between the CO 14 cotton and <i>Gossypium sturtianum</i> and <i>Gossypium gossypiodes</i> wild species. Working out the boll setting percentage Collection of crossed bolls Raising of F₁ generation and pollen fertility study Observations on locule number, seed set, change in surface morphology, lint & finesss etc in both F₁ and their parents. Observation on boll damage.
 Student: Ms. K. Manonmani Will be allotted a thesis problem on isolating desirable segregants from intra <i>hirsutum</i> crosses and their genetic analysis.
Period: August 16 – February 17 at field trials March 17 to June 17 – quality analysis of fibre samples.

N.Premalatha	1. Research:	Activities to be undertaken:
Assistant Professor		
(PBG)	Handling following projects:	University Research Project:
	 University research projects: 2 Nos. TNCCM scheme funded by Agriculture Department, Govt. of Tamil Nadu: 1 No. 	 Evaluation of 400 germplasm of <i>G. hirsutum</i> with 10 checks for characterization, documentation and for preparing a database in collaboration of PGR (Period: April 16 – February 17)
	 2. Teaching: Handling practical classes to PGR students (PG) (Course No. and Title : PGR 611 Conservation Genetics 2+1) Handling practical classes to Under graduate students of IV year II Semester (Course No. and Title : PBG 401 Breeding field crops and horticultural crops (2+1)) 3. Additional Responsibility: Farm Manager – Regular farm activities 	 a. Raising crossing block with the objective of developing compact plant type. (6 female parents: 4 male parents) (Period: August 16 - January 17) b. Analysing the parents for yield fibre quality parameters (Period: February 17 - April 17) 3. Evaluation of the segregating materials (27 F₃ & 4 F₄ cross combinations) for compact plant type with long staple length and fibre strength (Period: August 16 - March 17) 4. Conducting yield trials <i>viz.</i>, Replicated row yield trial preliminary yield trials and advanced yield trials for compact plant types identified earlier (Period: February 17 - April 17) 5. Conducting multilocation trials 2016-17 (Period: August 16 - February 17) 6. Conducting 30 Nos. of ARTs at the identified locations through KVKs for TCH 1819 and TCH 1822 (Period: August 16 - March 17) 7. Evolution of Bt cotton hybrids received from the private companies for yield and quality parameters (Period: August 16 - March 17) 8. Organizing field demonstrations and field day under Tamil Nadu Cotton Cultivation Mission Project (TNCCM)

		Additional responsibility: Farm Manager – Regular farm
		activities
Subbalakshmi Lokanadhan Professor (PBG)	 Research Conducting All India Coordinated Cotton Improvement project (AICCIP) trials. One University Research Project to be proposed. Teaching: Handling allotted UG & PG course as per allotment. Extension: AICCIP - FLD Physical and Financial Targets for Front Line Demonstration on Cotton under NFSM - Commercial Crops during 2016-17 Answering to queries raised by farmers of Tamil Nadu. Assisting in conduct of FLD and monitoring by visiting demo under FLD 	 Cultivation Mission - Compact genotypes evaluation under HDPS & standardizing agronomic practices for organic cotton As per the technical programme of Annual Group Meet AICRP on cotton the following AICCIP Agronomy trials were allotted for Department of Cotton, TNAU 2016-2017. 1. Agronomy IA: Agronomic requirements of promising pre-release/ recently released <i>hirsutum /arboreu</i>m genotypes/ hybrids of cotton 2. Agronomy IB: Evaluation of compact culture under HDPS with different nutrient levels. 3. Agronomy II: Developing suitable Agronomy for Bt hybrids of the region 4. Agronomy V: Technology for organic cotton
		 2. Teaching AGR 608 - Agronomy of Sugar, Fibre and Forage Crops (2+1) + two more course as per the allotment. 3. Additional Responsibilities: Consolidation and scrutiny of reports with regard to Cotton crop and works related to Cotton Scientist meet and SWC as Cotton agronomist. Sending weekly weather advisory and forecast to CICR.

K Senguttuyan 1	1 Research	1 Research
Assistant Professor (Entomology) 2 3	 1.Research AICRP on Cotton (Entomology part) Pests monitoring in the cotton fields University sub projects - One CPPS/CBE/ENT/COT/2015/001 - Studies on thrips diversity of cotton ecosystem and it's management 2. Teaching Course associate for B.Sc. (Ag.) AEN 401 Pests of Horticultural crops and their Management (2+1) 3. Additional Responsibilities Computer maintenance in-charge Purchase of Farm chemicals Insect arrangements for Insect Museum Database development for TNAU Insect collection. Website updating for Cotton and CPPS pages 	 1.Research AICRP Technical programme Period: August 2016 - February 2017 As per the technical programme of Annual Group Meet AICRP on cotton, the following eight AICCIP entomology trials are allotted to the Department of Cotton, TNAU during kharif 2016. 1. Ent. 1 (a): Screening of breeding material for resistance to insect pests (National & Zonal Trials) 2. Ent. 1 (b): Advanced screening of promising entries for development of repository for sucking pests 3. Ent. 2: Population dynamics to develop suitable forecasting mode 4. Ent. 4: Survey for key and emerging pests in cotton in Farmers Field for weekly advisory 5. Ent 5.b.To study the efficacy of combination insecticides against pests of cotton (Sucking pests and Boll worms) -(Paid up trial by Dow Agro Sciences India Pvt. Ltd). 6. Ent 6 b: Evaluation of Mating Disruption Pheromone for the Pink Boll worm -Paid up trial by Bio-Bee India 7. Ent 7:Evaluation of egg parasitoid <i>Trichogramma</i> <i>bactrae</i> through inundative release 8. Ent 8: Entomologists of all centers will record observations in the Agron1B (HDPS evaluation trial) and Agron -V(Tech for organic cotton
		Univer

		 Developing phylogenitic key characters for Thrips taxon Developing management strategies for cotton thrips. 2. Teaching UG courses as per the allotment 3. Additional Responsibilities Will be continued
P. Latha, Assistant Professor (Plant Pathology)	 Research AICRP on Cotton (Plant Pathology part) Crop Scientist Meet on Cotton Teaching Experiential Learning - Commercial Production of Mushroom (0+5) Mushroom Cultivation Principles of Plant Pathology Additional Responsibilities Assisting in the Post Entry Quarantine (PEQ) activities. In charge of casual labourers, Dept. of Plant Pathology, TNAU, Coimbatore. Assisting in Mushroom works. Conducting one day and five day mushroom training programmes. Compilation of AICRP Monthly, Quarterly and Half yearly reports, Dept. of Cotton, TNAU, Coimbatore. In charge in the Tribal Sub Plan Scheme on Cotton. 	 AICRP Technical programme As per the technical programme (2016-2017) of Annual Group Meet AICRP on cotton, the following six AICCIP plant pathology trials are allotted to the Department of Cotton, TNAU, Coimbatore during kharif 2016 (August 2016-March2017). Path.1: Epidemiological studies on cotton diseases 1(b): Disease progress in relation to weather factors 1(c): Studies on the variability of Alternaria leaf spot 1(d) Survey and Epidemiology of TSV Path.2: (a) Screening of breeding lines for disease reaction Path.2 (b) Confirmation and maintenance of disease resistant lines Plant Protection: Thrust Areas Population of dynamics and epidemiology of diseases Host plant resistance Integrated Pest Management (using ecofriendly agents; biocontrol agents and chemicals)
	Principal Investigator of Venture Capital Mushroom Scheme.	The trials will be taken up during August 2016.

Co-PI of DST Scheme, NRDMS DIVISION,
New Delhi.

Cotton Research Station, Srivilliputtur

Scientist Name and Designation	Present workload	Proposed work schedule during 2016-17
M. Gunasekaran Professor (PBG) and Head	Administration: Coordinating the activities of Cotton Research Station, Srivilliputtur Research: PI in TNCCM Scheme - involved with evolution and evaluation of compact cotton genotypes suitable for HDPS and mechanized harvest Extension: Coordination of conducting FLD (ICAR) on cotton and TSP Conducting large scale demonstration of TCH 1819 in farmer's field of Madurai and Virudhunagar district Attending zonal and other related meeting organized by Dept. of Agriculture Member in Agricultural Production Council, District Watershed Committee, District cotton Committee Strengthening infra structure facilities – purchased laboratory ginning machine, farm implements, bag closure, weighing machine etc.,	 seed materials for large scale demonstration in the farmer's field Large scale demonstration of TCH 1819 in ensuing season (SepOct.) in farmer's field of Madurai and Virudhunagar district Coordination of ICAR-FLD, ICAR-TSP

R. Vimala Professor (Pathology)	 PCC activities Farm Superintendent Compilation of Station Monthly report Scientist in charge for library URP - Screening of cotton accessions for resistance to major foliar and root diseases (June 2013 to May 2016) 	 CSM, 2016 Action Plan (Plant protection) Farm Superintendent Compilation of Station Monthly report Scientist in charge for library Weekly diseases monitoring
Chelviramessh Asst. Professor (Agron.)	 In-Charge of Agronomic experiments under AICCIP, URP and Action plan of CSM In charge of AICRP- FLD & AICRP - TSP Compilation of reports for CSM – cotton and oilseeds, Reports for SWC, RREAC, Annual Review Report for Director of Research and Vice-Chancellor Meteorological observatory Weekly Weather Advisory report Scientist in charge under NADP as a member of third party inspection for Srivilliputtur block and Resource person for agronomic technologies for Virudhunagar district 	 URP "Management of plant density and architecture under high density planting system (HDPS) for mechanized cotton production". The experiment will be conducted during August, 2016 under winter irrigated condition with the objective to find out the optimum schedule of Mepiquat chloride to arrest excessive vegetative growth under HDPS and to find out appropriate time of application of defoliant to facilitate mechanical harvest. AICCIP Experiments Agron. IB - Evaluation of compact culture under HDPS with different nutrient levels 2. Agronomy II - Developing suitable agronomy for Bt hybrids of the region Agron. VIII - Evaluation of Desi (<i>arboreum</i>) genotypes under HDPS CSM, 2016 Action Plan Strategies for enhancing quality and productivity

M. Gnanasekaran Asst. Professor (PBG)	 Evaluation of AICRP on cotton - breeding trials Handling one university sub project on development of medium staple cotton varieties with resistant to jassid Breeder and TFL seed production - SVPR 1 sesame variety Assisting in Breeder and TFL seed production of Cotton varieties SVPR 2, SVPR 3 and SVPR 4 Assisting in the AICRP on Cotton-Tribal Sub Plan activities Evaluation of MLT on Cotton and Sesame BSP&TFL Monthly report consolidation In charge Scientist for Rajapalayam Block under NADP 	 of organic cotton TNCCM High density planting of TCH 1819 to suit mechanized cotton cultivation OFT Integrated Weed Management in cotton AICRP -FLD & AICRP -TSP Identified as Team leader for carrying research on Medium staple cotton (<i>G.hirsutum</i>) development Activities to be undertaken: Evaluation of hybrids (HxH) which were developed in previous winter season 2015 already raised and due for harvest during July 2016. Identification superior F₁s for progenies studies and selection towards medium staple cotton coupled with resistant to jassid. Identification of superior progenies from the segregating materials (F₂s, F₃s, F₄s, F₅s) already raised in Summer 2016 for further advancements Evaluation of various breeding trials <i>viz.</i>, RRYT, PVT, AVT, MLT on <i>hirsutum</i> trials already raised and due for harvest during July 2016 and advancement for further evaluation.
	 Plan activities Evaluation of MLT on Cotton and Sesame BSP&TFL Monthly report consolidation In charge Scientist for Rajapalayam Block 	 Evaluation of various breeding trials <i>viz.</i>, RRYT, PVT, AVT, MLT on <i>hirsutum</i> trials already raised and due for harvest during July 2016 and advancement for further evaluation. Conducting various breeding trials received
		 under AICCIP during winter 2016 season Seed production with elite cultures identified in AVT in winter 2016 season for proposing to MLT and AICCIP trials during winter 2017. Raising crossing block with high yielding and jassid resistance parents during winter 2016 in order to synthesis different recombinants for

K. Thiyagu Asst. Professor (PBG)	 Evaluation of AICRP on cotton - breeding trials Handling Two University Sub projects - 1. Nucleus and Breeder seed production of cotton varieties (SVPR 2, 3 and 4) 2. Development of short duration with high yield cotton genotypes suitable for rice fallow conditions Breeder and TFL seed production in cotton varieties SVPR 2, SVPR 3 and SVPR 4 Assisting in TFL seed production of Sesame SVPR 1 Farm manager in Main and Old farm of CRS, SVPR In charge scientist for Private Bt cotton testing study 2015-16 In charge scientist for Watrap Block under NADP 	 Identified as Team leader for carrying research on development of Rice fallow cotton (<i>G.hirsutum</i>) Activities to be undertaken: Nucleus seed production of cotton varieties SVPR 2, SVPR 3 and SVPR 4 Breeder seed production of cotton varieties SVPR 2, SVPR 3 and SVPR 4 and supply based on the production indent and despatch instruction Raising of crossing block with cotton genotypes having early duration and high yield parents during winter 2016 in order to synthesis different recombinants. Identification of superior F₁s for progenies studies and selection towards short duration cotton coupled with high seed cotton yield during summer 2017.
	• In charge scientist for Watrap Block under	during summer 2017.

K C I		IIDD
K. Sasikumar	• In charge of AICCIP Scheme for Entomology	URP
Asst. Professor (Ento.)	part	Field experiment on management of pink bollworm
	• In charge of Private Bio efficacy scheme for	in cotton with different insecticides and pest
	GSP crop science Pvt. Ltd.	monitoring.
	• In charge of AICCIP – TSP scheme	
	• Compilation of planning and monitoring and	AICCIP and CSM Experiments
	video conference report.	• Screening of breeding material for resistance to
	• In charge of condemnation of unserviceable	insect pests.
	articles.	• Population dynamics to develop suitable
		forecasting model
	Scientist in charge for Vembakottai block.	• Survey for key and emerging pests in cotton in
	• Weekly pest and disease advisory report-	Farmers Field for weekly advisory
	AICCIP	 To study the efficacy of combination insecticides
	Maintenance of vehicle office Jeep	5
		against pests of cotton (Sucking pests and Boll
		worms)
		• Evaluation of pheromone traps and lures against
		Cotton Pink Boll worm through mass trapping.
		• Evaluation of egg parasitoid <i>Trichogramma</i>
		<i>bactrae</i> through inundative release.
		Pest observation on HDPS from Agronomy trial
		Agron. IB and Agronomy V
		• CSM, 2016 Action Plan - Strategies for enhancing
		quality and productivity of organic cotton.
		• Agricultural Entomology Action plan will be
		conducting during 2016.
		 AICCIP –TSP scheme activities.
		Compilation of AICCIP report (Monthly, Overtarily Helf yearly and Approxi)
		Quarterly, Half yearly and Annual).

Scientist and his/ her Designation	Present work load	Proposed work schedule during 2016-17
R. Kavimani Professor and Head	 Coordinating the activities of Cotton Research Station, Veppanthattai. Research Handling University Research Projects	 Coordinating the activities and infrastructure development of Cotton Research Station, Veppanthattai. Research University Research Projects- 3 Nos. Cotton - 2, Maize - 1. Externally Funded Scheme - TNCCM - Experiment on High Density Planting System of cotton. Identified as Coordinating scientist for conducting the trial "Drought mitigation technology for rainfed cotton". Strategies for enhancing quality and productivity of organic cotton. OFT - Fertilizer prescription under IPNS for cotton under drip fertigation. Teaching Advisary committee member for 2 Ph.D students. Extension Scientist incharge for the Perambalur Block

Cotton Research Station, Veppanthattai

C. Circolumean Chatige Descende Objectives 1	Decease (05.0/ Time allocation)
,	. Research - (05 % Time anocation)
Professor (PBG), Development of long staple and extra long staple Cotton varieties & hybrids for winter rainfed cultivation. Theme Area - Scientist involvement "Long and extra long staple Cotton varieties" Long and extra long staple Cotton varieties" 2.	 Research - (85 % Time allocation) University Research Project - 2 Nos. Development of high yielding long staple cotton varieties and hybrids for winter rainfed in Tamil Nadu. Development of high yielding single cross maize hybrids for rainfed system in Tamil Nadu. AICCIP - Voluntary center - No of trials -5 Nos. Teaching - Nil Extension (15 % Time allocation) Scientist in charge for Veppanthattai Block, Perambalur District Resource scientist for training programme on Cotton, Maize and general cultivation for all four blocks, organized by Dept. of Agriculture, Perambalur District Farmer's field visit to maize, cotton fields for various issues / problems. Special trainings/ meeting, Zonal workshops District collector's meetings, Grievance day meeting etc.

S.No	Activities details	June 16- Aug16	Sep16 – Nov16	Dec16- Feb17	Mar17- May17	No of days
1.	Preparation for sowing winter and summer season	0	5	5	0	
						10
2.	Cotton: F2 Evaluation in Summer and F3 in winter	17	12	11	9	10
						49
3.	Evaluation of F1 in summer and F2 in winter	5	5	5	5	20
4.	Yield estimation of pipe line culture in summer and	2	2	2	2	8

	winter					
5.	Generation of new crosses	2	3	0	4	9
6.	Harvesting/ Data recording	6	2	6	3	17
7.	Ginning/ Analysis of fibre	-	2	2	-	4
8.	Data analysis	3	3	3	8	17
9.	Seed multiplication of promising lines/ cultures	2	2	2	2	8
10.	AICCIP trial – 5 Nos	1	7	7	5	20
11.	Maize: Generation of Inbreeds / New F1	5	7	7	7	26
12.	Evaluation of hybrids	0	0	2	2	4
13.	Scientific meetings/ Reports	3	3	3	3	12
14.	Extension	2	2	2	2	
	Scientist in charge					8
15.	Resource Scientist	2	2	2	2	8
16.	Farmer's field visit	3	3	3	3	12
	Special training/meetings	2	2	2	2	8
		55	62	64	59	240
	Research - (85 % Time allocation), Extension (15 % Time allocation)					

K. Bharathi Kumar	1.Research	1.Research
Assistant Professor	Handling one University Research Project - Cotton	 University Research Projects- 1 No.
(PB&G)	 Principal Investigator -Tamil Nadu Cotton Cultivation 	Cotton -1
(1240)	Mission – TNAU Component – Scheme on "Development of	Externally Funded Scheme – TNCCM –
	compact genotypes in cotton (<i>G.hirsutum</i>)suitable for High	Experiment on High Density Planting
	Density Planting System and Mechanized harvest"	System of cotton.
		• Station Trial
	2.Teaching -Nil	 Large Scale Demonstration in
		Farmers field
	3.Extension	Evaluation of Bt Cotton Hybrids
	 Block Scientist incharge for the Veppur Block 	 Multilocation Trials
	4.Additional Responsibilities	2.Teaching- Nil
	Farm Manager / Store and vehicle maintenance	
	Principal Investigator - Tamil Nadu Cotton Cultivation	3.Extension
	mission – TNAU Component – Scheme on "Development of	Scientist incharge for the Veppur Block
	compact genotypes in cotton (G.hirsutum)suitable for High	
	Density Planting System and Mechanized harvest"	4.Additional Responsibilities :
	In charge for conducting Multi Location Trials allotted to	≻ Farm Manager
	CRS, Veppanthattai	
	 Frontline Demonstration in Cotton and Maize 	

K. Kalpana	1.Research	1.Research
Assistant Professor		
(Plant Pathology)	 Handling two University Research Projects on Cotton Research coordinator Principal Investigator -VCS- MPBI – Mass production of bioinoculants 	 Two numbers of University Research Projects. Research coordinator Principal Investigator -VCS- MPBI – Mass production of bioinoculants
	2.Teaching- Nil	
		2.Teaching- Nil
	3.Extension	
	Taskforce member for Alathur Block	3.Extension
	 Field visit to endemic pest and disease affected areas 	Taskforce member for Alathur Block
	 Giving onfarm and offfarm plant advisory service Member in polygreenhouse and onion storage structure inspection 	• Field visit to endemic pest and disease affected areas and pest disease monitoring
		 Giving onfarm and offfarm plant advisory service
		Member in polygreenhouse and onion storage structure inspection