

TAMILNADU AGRICULTURAL UNIVERSITY

Office of the Directorate of Research
Tamil Nadu Agricultural University
Coimbatore-641003.

Dated: 11.03.2019

PROCEEDINGS

A review meeting was conducted at the Tapioca and Castor Research Station (TCRS), Yethapur, under the Chairmanship of **Dr.K.S.Subramanian**, Director of Research, TNAU, Coimbatore on 06.03.2019 to assess the progress of work done in various research projects and activities of the station. All the projects were reviewed and the remarks are given for necessary action by all scientists in Tapioca and Castor Research Station, Yethapur. The following Scientists of Tapioca and Castor Research Station, Yethapur, attended the review meeting. The details are as follows.

Scientists of TCRS, Yethapur

1. Dr.S.R. Venkatachalam, Professor and Head
2. Dr.D. Raja, Professor (Agronomy)
3. Dr.M.K. Kalarani, Professor (Crop Physiology)
4. Dr.P. Arutchenthil, Assistant Professor (PB&G)
5. Dr.P. Kathirvelan, Assistant Professor (Agronomy)
6. Dr.M. Senthilkumar, Assistant Professor (Entomology)
7. Dr.P.S. Kavitha, Assistant Professor (Horticulture)
8. Dr.M. Deivamani, Assistant Professor (Pl. Pathology)

Research

- All the externally or internally funded research projects under various schemes AICRP , VCS , RFS, NADP, TNIAMP and others are to be numbered properly in accordance with the numbers assigned by the Office of the Directorate of Research, TNAU, Coimbatore.
- Submit completion reports in prescribed formats for those projects that were officially closed. (All Scientists)
- The completed projects must result in publications in peer reviewed national or international journals besides in regional language. As per the instructions of the Vice Chancellor, all the manuscripts that are to be submitted for publications should get number from the Director of Research Office.

- The outcome of the completed projects that were discussed should be presented in the upcoming crop scientist meet 2019.
- Project that were found unproductive, inconsistent or irrelevant to the agro-climatic zones were suggested to be closed
- Each scientist should possess at least one research project relevant to the requirement of the agro-climatic zone
- Scientists were strongly suggested to get projects from externally funding agencies and advised to take advantage of Grantsmanship Workshops to be organized in the month of March 2019 by the Director of Research, TNAU, Coimbatore.
- Promising castor hybrids identified in core project should be further evaluated critically for subsequent release.
- Industry oriented tapioca variety and short duration variety may be evolved.
- FLD on castor may be video documented and given as a technology for doubling the farmers income
- Promotion and popularization of castor hybrids in dry tracts of Tamil Nadu through TNAU stations wise CRS, Srivilliputhur, ARS, Aruppukottai, RRS, Kovilpatti and DARS, Chettinad should be attempted.
- Estimation of HCN content in tapioca leaves, rind and tubers may be done in TNAU Centre and not at Private organization.
- Finger printing of all genotypes pertinent to tapioca and castor may be done through outsourcing. Concerned Scientists may be permitted to attend training on finger printing at NBPGR, New Delhi.
- Research work other than mandatory crops may be avoided and can be taken up in the farmers holdings.

General

- TCRS, Yethapur foundation day has to be celebrated every year on 1st April and publish the same in Dailies
- TCRS, Yethapur is one of the well maintained farms that deserving appreciation and due recognition of support.
- ICAR - Asst.Prof.(Agrl.Econ.) is vacant for more than one year.
- Senior research fellow (SRF), Seed science and Technology may be recruited utilizing the fund from seed hub for castor hybrid seed production programme.
- Key features of TCRS, Yethapur in the form of video graphing should be depicted in the display board which will be supplied by the Office of the Directorate of Research, TNAU, Coimbatore.

- Digitalization work on castor seed distribution in Tamil Nadu has to be done using remote sensing on payment basis with the help of Dept. of Remote sensing.
- Permanent exhibits related to Tapioca and castor may be displayed in a separate exhibition hall, hence suitable proposal may be sent to the Directorate of Research for financial assistance
- Centralized laboratory with scientific equipments may be established for bio physical and bio chemical analysis
- Panoramic view of experimental trials may be captured utilizing drones through outsourcing.
- Proposal may be submitted for the purchase of calorimeter for estimating starch content in tapioca.
- Yethapur being the seed production hub for castor, scientists must bestow utmost care to produce and supply quality seeds in the new release castor hybrids YRCH 2, YRCH 1 and new castor variety YTP 1.

Farms

- In the farm, experimental fields are neat, clean and well maintained with appropriate field boards and labels.
- The following infrastructures may be created by utilizing the revolving fund
 - Irrigation source may be improved by digging borewell
 - Purchase of a new tractor
 - Erection of implement shed
 - Micro irrigation for all fields
 - Farm fencing with chain link
- The station deserves compliments for its overall good performance.

Administration

- Office records are updated and well maintained

Detailed Review Report

Name of the Research Station: Tapioca and Castor Research Station

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

No	Project Leader	Project No. & Title	Date of Start & Closure	Status	Director of Research / Technical Director
A 1	Tapioca Dr.P.S.Kavitha Asst. Prof (Hort.)	AICRP/HOR/CBE/VEG /009 All India Coordinated Research Project on Tuber Crops - Cassava	April 2018 to March 2019	<p>CTCRI - Germplasm</p> <ul style="list-style-type: none"> ❖ 100 germplasm accessions under national repository programme received from CTCRI are maintained TNAU TCRS - Germplasm collections ❖ About 370 germplasm accessions are being maintained at TCRS, Yethapur. ❖ Planting of all germplasm accessions completed by 23.12.2018 and there was 95 % establishment <p>IET on Cassava</p> <ul style="list-style-type: none"> ❖ Harvesting done during last week of february 2019. ❖ Observations recorded analysis under progress <p>MLT on K efficient Cassava lines</p> <ul style="list-style-type: none"> ❖ Harvesting completed and plant analysis under progress 2nd year planting done on 18.12.2018 <p>Cassava Crop cafeteria</p> <ul style="list-style-type: none"> ❖ Harvested and planted on 21.01.2019 	<ul style="list-style-type: none"> • Finger printing to be done by outsourcing • Training may be proposed for attending at NBPGR, New Delhi • Necessary steps may be taken to equip laboratory for analysis of the plant and soil samples with the help of lab technicians working at TCRS, Yethapur

2	Dr. M. Velmurugan, Asst. Prof. (Hort.) Dr.S.R.Venkatachalam Prof. (PB&G),	HCRI/YTP/ VEG/2015/001 Breeding of cassava for high tuber yield and starch content	Dec 2015 to Nov 2018	❖ Seedlings from crosses and open pollination are obtained and maintained in the shade net nursery. Completion report has to be submitted by the project leader (Dr.M.Velmurugan). The materials will be added to the germplasm and evaluated	<ul style="list-style-type: none"> • The project may be closed • Completion report to be submitted • New URP may be proposed for the continuing of F1 progenies
3	Dr.P.S.Kavitha Asst. Prof (Hort.)	HCRI/YTP/ HOR/TAP/ 2017/001 Evaluation of suitable cassava variety for rainfed ecosystem in hilly areas of Tamil Nadu	August 2017 to August 2020	<ul style="list-style-type: none"> ❖ Planting taken up during august in kolli hills and October at karumandurai ❖ Fertilizer application and weeding done 	<ul style="list-style-type: none"> • The project may be continued
4	Dr.P.S.Kavitha Asst. Prof (Hort.)	MLT	April 2018 to March 2019	<ul style="list-style-type: none"> • MLT on Cassava ❖ Planting materials of cassava viz., Me 681 and released varieties has been sent to 17 centres for conducting MLT. ❖ Communication sent for ART of Me 681 and response received from 5 districts ❖ ART materials supplied to KVK, Sandhiyur, KVK, Papparapatty, KVK, Myrada and DDh salem. Steps taken to supply the material to other places 	<ul style="list-style-type: none"> • Give the outcome for CSM 2019 • Other than mandate crops may be avoided

5	Dr.P.S.Kavitha Asst. Prof (Hort.)	New project suggested in Action plan- CSM 2018	April 2018 to March 2019	<p>MLT on Brinjal</p> <ul style="list-style-type: none"> ❖ Crop completed ❖ Observation will be tabulated during February <p>MLT on Turmeric</p> <ul style="list-style-type: none"> ❖ Weeding, fertilizer application and irrigation done periodically ❖ Observation data on vegetative stage recorded <p>Introduction of Cassava in tobacco affected areas of Vedaranyam block</p>	<p>for any trial</p> <ul style="list-style-type: none"> • If essential MLT to conduct MLT in farmer's holdings
6	Dr. M. K. Kalarani, Professor (CRP) Dr. S. Suganya, AP (SS&AC) and Dr. P.S.Kavitha, AP (Hort.)	DCM/YTP/CRP/TAP/2 017/001 Evaluation of cassava genotypes for salt tolerance	Nov, 2017 to Dec, 2019	<p>From experiment I, Me681 and TCMS7 were selected as salt tolerant, H226 and Kungumarose as moderately tolerant and Sree Athulya as salt susceptible for further investigation in experiment II. Experiment II was initiated on 02.04.2018 with Me 681, TCMS H226 Kungumarose, Shree Athulya and two treatments of control and 120mM of NaCl salt level. Morphological characters recorded on 160 DAP. Now the crop is in maturity stage and will be harvested during first week of March , 2019.</p>	<ul style="list-style-type: none"> • URP number may be obtained by submitting the proposal • Outcome may be presented in CSM 2019 • Leaf water potential may be estimated • Salinity tolerance information to be given in CSM 2019 • Analysis may be done in SCEM / TEM at Dept. of Nanotechnology, TNAU, Cbe

					<ul style="list-style-type: none"> The effect of castor gold and cassava booster may be tried on yield.
B	Castor				
I	Crop Improvement				
1	Dr.S.R.Venkatachalam Professor (PB&G)	CPBG/YTP/PBG/2013/0 01 Induced chemical mutagenesis for genetic diversification of pistillate and monoecious lines of castor	Aug, 2013 to July, 2018	A total of 32 agronomically superior promising stable pistillate progenies are evaluated from M4 population. Pistillate progeny M5 29-11-5 recorded highest seed yield of 350 grams per plant. Total of 20 agronomically superior promising stable monoecious progenies are evaluated from M4 population. Monoecious progeny M4 106-2-3 recorded highest seed yield of 315 grams per plant. Completion report preparation is in progress and will be submitted in third week of February 2019.	<ul style="list-style-type: none"> The project may be closed and completion report to be submitted
2	Dr.P.Arutchenthil, Asst.Prof. (PB&G)	CPBG/YTP/PBG/CAS/ 2015/001 Collection, Conservation, Evaluation, characterization and utilization of castor Germplasm	Jan 2015- Jan 2020	Accessions were evaluated for quantitative traits at TCRS under rainfed situations for facilitating precise selection of germplasm accessions to meet the research needs and to understand in built potentiality of germplasm for various quantitative traits. Among the germplasm accessions screened against high seed yield, only 16 entries recorded high seed yield per	<ul style="list-style-type: none"> Finger printing to be done by outsourcing Training may be proposed for attending at NBPGR, New Delhi DUS data

3	Dr.P.Arutchenthil, Asst.Prof. (PB&G)	CPBG/YTP/PBG/CAS/ 2012/002 Development of castor varieties with high yield and resistant to major pest and diseases through pedigree breeding for Tamil Nadu.	July 2011 - June 2016	Completion report preparation is in progress.	plant and three accessions RG 96 RG (345 g), RG 109 (355g) and RG 119 recorded highest single plant seed yield of 350 gm per plant.	available on castor may be linked with TNAU portal
4	Dr.P.Arutchenthil, Asst.Prof. (PB&G)	SEC/YTP/SST/CAS/201 3/001 Studies on the effect of time of sowing and spacing on seed yield and quality of hybrid seed production in castor variety YRCHI	August 2013 to July 2016	Completion report preparation is in progress.	Completion report preparation is in progress.	Completion report to be submitted
II	Crop management (Agronomy)					
1	Dr.D.Raja Professor (Agronomy)	DCM/YTP/AGR/CAS/2 015/001 Effect of spacing, nipping primary shoot and pruning on growth and yield of perennial castor variety TCRS 1205 under irrigated condition	July, 2015 to April, 2018	As per the proceedings of CSM for oilseeds 2018 the project is recommended for closure. The completion report is under progress and will be submitted on 22 nd February, 2019	Completion report to be submitted	Completion report to be submitted Outcome may be presented in CSM 2019

2	Dr.D.Raja Professor (Agronomy)	DCM/YTP/AGR/CAS/2 015/002 Integrated weed management for castor under irrigated condition	Oct, 2015 to Sep, 2017	As per the proceedings of CSM for oilseeds 2018 the project is recommended for closure. The completion report is under progress and will be submitted on 22 nd February, 2019	<ul style="list-style-type: none"> Completion report to be submitted
3	Dr. P.Kathirvelan Asst. Prof. (Agron.)	DCM/YTP/AGR/CAS/2 015/003 Optimizing plant density for promising castor Hybrid	Dec 2015- Dec 18	Preparation of completion report is in progress.	<ul style="list-style-type: none"> Completion report to be submitted
4	Dr. P.Kathirvelan Asst. Prof. (Agron.)	DCM/YTP/AGR/CAS/2016/003 Optimizing plant spacing and nutrients (NPK) requirements for pre release hybrid YRCH 1116 under rainfed and irrigated conditions	April, 2016 to Dec, 2018	In experiment I, higher seed yield of 2260 kg/ha was registered with the treatment comprising of 150% RDF (135:65:65 kg NPK/ha) +180 x 150 cm spacing which resulted in realization of higher net returns of Rs.68560/ha with BCR of 384. In experiment II, Significantly higher seed yield was recorded under application of 125% RDF +180 x 150 cm spacing (T ₆) (2020 kg ha ⁻¹) followed by the application of 100% RDF +180 x 150 cm spacing (T ₃) (1910 kg ha ⁻¹). Preparation of completion report is in progress.	<ul style="list-style-type: none"> Completion report to be submitted
5	Dr. P.Kathirvelan Asst. Prof. (Agron.)	DCM/TP/AGR/CAS/20 17/001 Identifying the promising castor genotypes under closer spacing for single harvesting	July 2017- March 19	Remarkable increase in the seed yield was achieved due to different plant densities. Among the different plant geometry, closer spacing of 75x60 cm registered significant higher seed yield of 740 kg ha ⁻¹ . The next best spacing was 60x45 cm (701 kg ha ⁻¹). Wider spacing of	<ul style="list-style-type: none"> Completion report to be submitted Outcome may be presented in CSM 2019

				120x90 cm had recorded the lowest seed yield of 450 kg ha ⁻¹ . Castor genotype did exert a significant influence on the seed yield and the highest seed yield of 730 kg ha ⁻¹ was recorded in YRCS 1205 as compared to other genotypes which might be due to higher test weight (42.28 g) as compared to other genotypes. Preparation of completion report is in progress.	
6	Dr. P.Kathirvelan Asst. Prof. (Agron.)	DCM/TVM/AGR/GNT /2016/001. Crop establishment, suitable intercrop for semi spreading groundnut under rainfed condition.	June, 2016 to May, 2019	The results of the on farm experimental trial showed that significant differences on growth and yield attributing characters on groundnut was noticed among the crop establishment treatments and higher values were recorded in seed drill sowing under raise bed followed by compartmental bunding. With respect to inter cropping, a higher yield and return was recorded in groundnut+castor inter cropping (6:1 ratio) followed by groundnut+redgram.	• Completion report to be submitted
7	Dr. P.Kathirvelan, Dr. S. Suganya, Dr. K. Sivagamy, Dr. P. Sridhar and Dr. P. Balaji	DCM/YTP/AGR/CAS/2 016/002 Introduction of castor as intercropping in samai in hilly areas	June, 2016 to May, 2019	Experimental trial was laid out at Karumanthurai village during Rabi 2018 season under rianfed condition. The crop is at maturity stage.	• Completion report to be submitted
8	Dr. P.Kathirvelan Asst. Prof. (Agron.)	Nutrient Management for hybrid maize in rainfed vertilsol	June 2018- May19	Crop is harvested. Data analysis is in progress.	• Concentrate only on mandate crop
9	Dr. P.Kathirvelan, Asst. Prof. (Agron.)	Transplanting studies in tap rooted oilseed crops	Jan 2019 - Sep 2019	Crop is at formation of primary spike stage.	• URP number may be obtained

		may be studied				<ul style="list-style-type: none"> • Outcome may be presented in CSM • Bio agents may be included in the mixture and evaluate • URP number may be obtained
10	Dr. P.Kathirvelan Asst. Prof. (Agron.)	Castor may be tested at Vedharanyam	2018-19		Preliminary sensitization meeting on castor hybrid was organised at Vedharanyam block. The crop will be raised during second week of March 2019.	
III	Crop Protection					
a	Entomology					
1	Dr. M. Senthilkumar, Asst. Prof. (Ento.)	CPPS/YTP/ENT/ CAS/2015/001 Biology and management of castor whitefly (<i>Trialeurodes ricini</i>) and castor thrips (<i>Retithrips syriacus</i>) in Rabi castor	Sept 2015 to August 2018		Development and oviposition of castor whiteflies <i>Trialeurodes ricini</i> were studied on castor under laboratory conditions (28°C and 65 % RH). Four nymphal instars and a transitional form were noted. The duration in the egg 3.4±0.98 days; first instar Development and oviposition of castor thrips <i>Retithrips syriacus</i> were studied on castor under laboratory conditions (28°C and 65 % RH). Two nymphal instars and two transitional form were noted. The duration in the egg 4.13±0.91 days; first instar 2.33	<ul style="list-style-type: none"> • Project may be closed • Completion report to be submitted • Outcome may be presented in CSM 2019 • Gadget developed for collecting micro parasitoids may be presented during CSM 2019.
2	Dr. M. Senthilkumar, Asst. Prof. (Ento.)	CPPS/YTP/AEN/014/001 Identification and Cataloguing Parasitoid Fauna in Castor	Jan, 2014 to Dec, 2015		Completion report preparation is in progress	<ul style="list-style-type: none"> • Project may be closed • Completion report to be submitted

		Ecosystem and Enhancing their Beneficial Capacity for Biological Control				<ul style="list-style-type: none"> Outcome may be presented in CSM 2019
b	Pathology					
1	Dr.M.Deivamani, Asst. prof. (Pl. Path.)	CPPS/YTP/PAT/TUB/2 018/001 Integrated management of cassava mosaic disease in tapioca	Oct 2018 to Sep 2021	Crop under vegetative stage. Disease incidence will be observed in periodically.	<ul style="list-style-type: none"> Project may be continued Get silica based nanoparticle from Dept. of Nanoscience and Technology, TNAU, Cbe and efficacy may be tested Virus load may be assessed with TEM 	
C	ICAR-AICRP-Castor					
I	Crop Improvement					
1	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2. Genetic improvement for yield and other economic characters. 2.1 Development of superior monoecious lines. 2.2 Development of superior pistillate lines.	April 2018 to March 2019	The following entries YRCS-1205, RG-72, TMV-5, SKI215, RG-1941, M3-28-3-1, RG-2661 were raised in crossing block and effecting crosses for earliness, tolerance to drought, compact plant type for intercropping, tolerance to gray mold	<ul style="list-style-type: none"> The project may be continued 	
2	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)		April 2018 to March 2019	The following entries DPC-9, YRCP-1, YRCP-2, SKP-84, JP-65, JP-96 were raised in crossing block and effecting crosses for leaf hopper and wilt resistance, ideal ISF expression	<ul style="list-style-type: none"> The project may be continued 	

3	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.3 Development of genepool for agronomic traits.	April 2018 to March 2019	The following entries for monoecious genepool: YRCS-1205, TMV-5, SKI215, Namagiripettai-local, Manjini-local and Pistillate genepool: DPC-9, SKP-84, DPC-23, JP-65, JP-96 were raised in crossing block and effecting inter crossing among selected lines.	• The project may be continued
4	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.4 Common evaluation of open pollinated varieties for rainfed ecosystem.	April 2018 to March 2019	A total of 18 (15+3) checks are tested on 14.09.2018. The crop is harvested. Analysis is in progress.	• The project may be continued
5	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.5. Preliminary evaluation and identification of promising hybrid combinations.	April 2018 to March 2019	No. of hybrids developed: 70 No. of hybrids evaluated: 70 Target - Early maturity (100-120 days), tolerant to gray mold ; seed yield >2.5 t/ha The crop is harvested. Analysis is in progress.	• The project may be continued
6	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.5.1. Preliminary Hybrid Trial (PHT) Set-I	April 2018 to March 2019	Entries :16 (14+2) The crop is harvested. Analysis is in progress.	• The project may be continued
7	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.5.2. Preliminary Hybrid Trial (PHT) Set-II	April 2018 to March 2019	Entries :16 (14+2) The crop is harvested. Analysis is in progress.	• The project may be continued

8	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.5.4. Preliminary Hybrid Trial (PHT) Set-IV	April 2018 to March 2019	Entries :18 (16+2) The crop is harvested. Analysis is in progress.	• The project may be continued
9	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.5.5. Preliminary Hybrid Trial (PHT) Set-V	April 2018 to March 2019	Entries :15 (13+2) The crop is harvested. Analysis is in progress.	• The project may be continued
10	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.5.6. Preliminary Hybrid Trial (PHT) Set-VI	April 2018 to March 2019	Entries :15 (13+2) The crop is harvested. Analysis is in progress.	• The project may be continued
11	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.5.7. Castor Crossing and Maintenance Block (DOS 05.10.2018)	April 2018 to March 2019	Number of Pistillate lines:17 Number of Monoecious lines :84 Number of GP Entries :66 Number of RG Entries : 20 Crossing work is in progress.	• The project may be continued
12	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.6. Coordinated Varietal/ Hybrid Trials <i>Kharif</i> 2018-19 2.6.1. Initial Varietal /Hybrid Trial (IVHT) Set-I	April 2018 to March 2019	Entries :16 (12+4) The crop is harvested. Analysis is in progress.	• The project may be continued
13	Dr.S.R.Venkatachalam Professor (PB&G) Dr.P.Arutchenthil, Asst. Prof. (PBG)	2.6.1. Initial Varietal /Hybrid Trial (IVHT) Set-II	April 2018 to March 2019	Entries :16 (12+4) The crop is harvested. Analysis is in progress.	• The project may be continued

II	Crop Management				
1	Dr. P.Kathirvelan Asst. Prof. (Agron.)	2.4. Effect of hydrogel on soil moisture and productivity of rainfed castor	April 2018 to March 2019	The results revealed that there was no significant difference among the treatments on plant height, No. of nodes plant ⁻¹ , No. of primary branches plant ⁻¹ , No. of effective spikes plant ⁻¹ , spike length and No. of capsules spike ⁻¹ . Hence, the treatment effect of hydrogel application during <i>Kharif</i> 2018 season under rainfed condition is nullified.	<ul style="list-style-type: none"> The project may be continued
2	Dr. P.Kathirvelan Asst. Prof. (Agron.)	2.7. Influence of conservation tillage on carbon sequestration in castor based inter cropping system.	April 2018 to March 2019	<p>Effect of conservation tillage and inter cropping system on soil health: remarkable improvement in bulk density, particle density and pore space (1.341 g/cc, 2.51 g/cc and 46.6 %, respectively) was noticed under conservation tillage practices which might be due to addition of more crop residues.</p> <p>highest OC content was noticed under Castor + Groundnut inter cropping followed by Castor + Daincha and the lowest OC content was noticed under Sole castor.</p> <p>Similarly, bulk density, particle density and pore space are also more in Castor + Groundnut cropping system.</p> <p>In contrast to this, higher available P and K were recorded under Castor + Daincha inter cropping system over Castor + Groundnut.</p>	<ul style="list-style-type: none"> The project may be continued Carbon content may be analysed

3	Dr. P.Kathirvelan Asst. Prof. (Agron.)	New 2.8 (i) Evaluating suitable method for Composting of Castor stalk	April 2018 to March 2019	Stalks of Kharif 2018 trials will be utilized for composting which will be harvested during first week of March and hence, the proposed trail will be initiated during first week of April 2019.	<ul style="list-style-type: none"> The project may be continued
4	Dr. P.Kathirvelan Asst. Prof. (Agron.)	New: 2.9 Studies on High Density Planting in Rabi Castor	April 2018 to March 2019	With regard to plant densities, the closer spacing significantly had the highest plant height in all castor genotypes. Lowest plant height was registered in YRCH 2 under wider spacing of 90x60 cm. Remarkable increase in the seed yield was achieved due to different plant densities. Among the different plant geometry, spacing of 90x60 cm registered significant higher seed yield.	<ul style="list-style-type: none"> The project may be continued.
5	Dr. P.Kathirvelan Asst. Prof. (Agron.)	2.10. Front Line Demonstration in Castor	April 2018 to March 2019	The results of the Front Line Demonstration conducted in the farmers holdings of Salem and Trichy Districts revealed that the average productivity of 2050 kg/ha was achieved owing to adoption of improved package practices which includes sowing of high yielding hybrid castor YRCH1, DCH 177 and DCH 519, balanced fertilization, integrated weed management practices, improved agronomic and intercultural operations, surveillance based integrated pest and disease management techniques. The percent increased over farmers practice (1750 kg/ha) was 17.14	<ul style="list-style-type: none"> Data on yield and income may be generated for all the FLDs and documented Give the technology for doubling the income with castor (less input and more income) in Nergunam village, perambalur Dt. Success story may be done with video

						documentation and posted in YouTube, TV channels etc.
III	Crop Protection					
a	Entomology					
1	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.1. Survey and monitoring of castor insect pests	April 2018 to March 2019	Insect pest of castor has been recorded at fortnightly interval at farmers field and weekly intervals at research station field.		• The project may be continued
2	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.1.2. Standardization of their mass multiplication method for the major parasitoids and predators associated with whitefly in castor	April 2018 to March 2019	Mass multiplication of <i>Eretmocerus mundus</i> is in progress		• The project may be continued
3	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.2. Screening for Resistance against Castor Insect pests 4.2.1. Screening of germplasm against leafhopper, thrips, and whitefly	April 2018 to March 2019	Recording population of leafhopper, thrips and whiteflies in different castor germplasms as per technical programme Field trial was laid out with 174 germplasm entries along with DCH 177, DCH 519, DPC 9, DCS 9 and DCS 107 as checks for screening against leafhopper, thrips and whitefly as per the technical programme. Trial is in progress		• The project may be continued
4	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.2.2. Confirmation of reaction of promising germplasm accessions to leafhopper	April 2018 to March 2019	Field trial was laid out with 7 germplasm entries along with DCH 177, DCH 519, DPC 9, DCS 9 and DCS 107 as checks for screening against leafhopper for leafhopper as per the technical programme and trial is in progress		• The project may be continued


5	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.2.2. Confirmation of reaction of promising germplasm accessions to whitefly, Rabi 2018	April 2018 to March 2019	Field trial was laid out with 5 germplasm entries along with DCH 177, DCH 519, DPC 9, DCS 9, 48-1, YRCH 1, and M-574 as checks and replicated twice for screening for whitefly as per the technical programme and trial is in progress	• The project may be continued
6	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.2.3. Screening of monoecious lines against sucking pests, <i>Khariif</i> , 2018	April 2018 to March 2019	Field trial was laid out with 6 germplasm entries against major sucking pests as per the technical programme. Trial is in progress	• The project may be continued
7	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.2.4 Screening of advanced breeding lines from coordinated varietal / hybrid trials against major castor insect pests, <i>Khariif</i> , 2018	April 2018 to March 2019	Field trial was laid out with 30 germplasm entries for screening against major insect pests as per the technical programme and trial is in progress	• The project may be continued
8	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.3.1. Evaluation of Newer Insecticides against whitefly in Castor, Rabi 2018	April 2018 to March 2019	Field trial was laid out and sowing was taken up on 12.11.2018 during rabi 2018 - 19 at TCRS, Yethapur as per the technical programme to control the castor whitefly (<i>Trialeurodes ricini</i>) with 10 treatments. Field trial was laid out with ten treatments in 4.5 m x 6.0 m (5 rows) per treatment in RBD, replicated thrice. Treatments will be during second fortnight of March 2019 for whiteflies management.	• The project may be continued
9	Dr.M.Senthilkumar Asst. Prof. (Ento.)	4.3.2. Evaluation of DOR-Bt 127 SC formulation against lepidopteran pests in castor	April 2018 to March 2019	Field trial was laid out and sowing was taken up on 13.09.2018 during <i>Khariif</i> 2018 - 19 at TCRS, Yethapur as per the technical programme to control the	• The project may be continued

				lepidopteran with 5 treatments. Field trial was laid out with five treatments in 4.5 m x 6.0 m (5 rows) per treatment in RBD, replicated four times. Treatments will be given 2 times for lepidopteran pest management.	
b	Pathology				
1	Dr. M. Deivamani Asst. Professor (Pl. Patho.)	AICRP/PBG/YPR/CAS/ 022 3.1. Disease Scenario in Different Agroclimatic Regions	April 2018 to March 2019	During survey (2018-19) no disease incidence was recorded.	<ul style="list-style-type: none"> The project may be continued
2	Dr. M. Deivamani Asst. Professor (Pl. Patho.)	AICRP/PBG/YPR/CAS/ 022 3.2. Influence of Weather parameters on <i>Botryotinia</i> gray mold development	April 2018 to March 2019	No <i>Botryotinia</i> gray mold incidence was observed in June and July dates of sowing.	<ul style="list-style-type: none"> The project may be continued
3	Dr. M. Deivamani Asst. Professor (Pl. Patho.)	AICRP/PBG/YPR/CAS/ 022 3.8. On-farm demonstration of Management of <i>Botryotinia</i> Gray Mold	April 2018 to March 2019	No gray mold incidence was observed in treatment and untreated control at farmer field.	<ul style="list-style-type: none"> The project may be continued
4	Dr. M. Deivamani Asst. Professor (Pl. Patho.)	AICRP/PBG/YPR/CAS/ 022 3.9. Integrated management of wilt and root rot of castor	April 2018 to March 2019	The experiments conducted in seven treatments with three replications were imposed as per the technical programme. Wilt incidence was recorded at 90 th and 120 th days after sowing.	<ul style="list-style-type: none"> The project may be continued
5	Dr. M. Deivamani Asst. Professor (Pl. Patho.)	AICRP/PBG/YPR/CAS/ 022 3.10. On-Farm	April 2018 to March 2019	The experiment conducted as per the technical programme 2018-19. No disease incidence was recorded in	<ul style="list-style-type: none"> The project may be continued

		demonstration of Management of wilt and root rot of castor		farmers field and yield will be calculated during last harvesting.	
D	Externally funded projects				
1	Dr.S.R.Venkatachalam, Prof. (PBG), Dr.P.Arutchenthil, Asst. Prof. (PBG)	ICAR/PBG/YTP/CAS/2 018 ICAR –“Creation of seed hub for Enhancing Quality seeds Availability of major oilseed Crops” (Castor)	2018-19 & 2019-20)	Totally 65 ac of Castor Hybrid seed production plots were raised and registered for certification. Seed processing equipment purchase is in progress	<ul style="list-style-type: none"> • SRF, Seed Technology may be recruited for scheme work in revolving fund
2	Dr.S.R.Venkatachalam Prof. (PBG), Dr.M.Senthilkumar Asst. Prof. (Ento.)	New (Head of Account: M 28 DB) Demonstration on quality seed production and arresting seed deterioration during storage in groundnut	April 2018 to March 2019	<p><i>Demonstration on groundnut production technology:</i> Sixty seven demonstrations covering 75 acres on quality production technology in groundnut has been taken up in Salem and Namakkal districts. Inputs viz., TNAU MN mixture for groundnut and groundnut rich and fertilizers were distributed to all the beneficiaries.</p> <p><i>Demonstration on pod storage technology:</i> Purchase of Super grain bag has been completed. Other inputs for conducting storage demonstration viz., Procurement of groundnut seed pod gunny bag, calcium nitrate chemical were completed. Storage demonstration initiated during 3rd week of Feb, 2019.</p>	<ul style="list-style-type: none"> • The project may be continued

E	VCS						
1	Dr.P.Arutchenthil, Asst. Prof. (PBG)	V 60 DX - VCS- Production of Hybrid castor seed under Contract Farming at TCRS, Yethapur.	April 2018 to March 2019	Totally 5 ac of Castor Hybrid seed production plots were raised and registered for certification.	• The project may be continued		
2	Dr.P.S.Kavitha Asst.Prof (Hort.)	V 60 CE - VCS Production of CO2 and CO3 Cassava seed material	April 2018 to March 2019	Planting materials of CO 2, Sree athulya and YTP 1 are distributed to the farmers (Nearly 30000 sets have been distributed during 2018-19)	• The project may be continued		
3	Dr. S.Suganya Asst.Professor (SS & AC)	V 60 BC : VCS Production of TNAU Coconut tonic and Castor gold for north western Zone of Tamil Nadu at TCRS, Yethapur.	April 2018 to March 2019	Around 11180 TNAU coconut tonic pockets (200 ml) were distributed to the coconut growers during 2018-19. Castor gold distributed for 138 acres during 2018-19.	• Proposal may be submitted for changing the project leader (Dr. M.K.Kalarani Professor , CRP)		
F	Revolving Fund						
1	Dr.S.R.Venkatachalam, Prof. (PBG), Dr.P.Arutchenthil, Asst. Prof. (PBG)	13 C 31 - Revolving Fund scheme - ICAR - Seed production in Agrl. Crops : Sub Head Revolving fund Agricultural crops in Castor.	April 2018 to March 2019	Totally 10 ac of Castor Hybrid seed production plots were raised and registered for certification.	• Necessary infrastructure facilities for the station may be created after getting University approval		
G	Core Project						
1	Dr.S.R.Venkatachalam, Prof. (PBG),	CPBG/YTP/PBG/CAS/ 2018/CP052 Development of superior castor hybrids with improved plant type and	April 2018 to March 2019	Total of 28 promising wilt resistant castor hybrids with improved plant type with following specific traits such as., • Basal branching • Semi compact spike	• The promising hybrid identified may be reported in CSM 2019		

		wilt resistance			<ul style="list-style-type: none"> Low branching angle <p>Semi dwarf plant types with node number of fourteen are evaluated and harvested. The promising hybrids identified will be promoted to MLT/ART for further testing. Data analysis is in progress.</p> <p>Based on the visual observations, the following hybrids viz., YRCH 18003, YRCH 18014, YRCH 18015 & YRCH 18022 are found promising for yield and yield components.</p>	
G	Others (TNIAMP)					
1	Dr.P.Kathirvelan Asst.Prof (Agronomy)	TN IAMP for Mettur - Noyyal Confluence	2019-2024	Detailed project report for Mettur - Noyyal Confluence with a budget outlay of 2.505 crore has been prepared and submitted for approval.	<ul style="list-style-type: none"> The project may be continued 	


 11/3/19
DIRECTOR OF RESEARCH

To
 The Professor and Head, TCRS, TNAU, Yethapur
 Copy to All the University Officers/All Professors and Heads, TNAU, Coimbatore
 Copy to Prof. & Heads of all Research Stations/Programme Coordinators, KVKs
 Copy to TPO to Vice-Chancellor, TNAU, Coimbatore