

# **CHAPTER VI**

## **COMPLIANCE AUDIT**



**PART-B**  
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**COMPLIANCE AUDIT**

**AGRICULTURE DEPARTMENT**

**6.1 Functioning of Tamil Nadu Agricultural University, Coimbatore**

**6.1.1 Introduction**

The Tamil Nadu Agricultural University (TNAU), Coimbatore was established in June 1971 under the TNAU Act, 1971 with the objectives of imparting education in agriculture and allied sciences and execution/extension of research work. The vision of the University is to become an important driver in nation's economy and world's top University in agriculture education and technology.

The University imparts agricultural education through 14 constituent (Government) and 26 affiliated colleges with 12 Undergraduate (UG), 33 Postgraduate (PG), 27 Doctoral degree courses in agriculture, horticulture, forestry and sericulture. Moreover, the 14 constituent colleges and 39 Research Stations undertake research activities across the State on area specific and crop specific issues. The University also undertakes various extension education activities viz., training, demonstrations, farm advisory services to needy farmers, on farm trials, etc., with the help of 14 Krishi Vigyan Kendras (KVKs) under their jurisdiction.

The Governor of the State is the Chancellor of TNAU and the Minister-in-charge of Agriculture is the Pro-Chancellor. The Vice Chancellor is overall in charge of the University, the Registrar is in charge of administration and the Comptroller is in charge of finance and accounts. The education activities are supervised by Deans and Research activities by Directors who are assisted by Professors/Associate Professors/Assistant Professors. The Extension Education is supervised by Director and assisted by KVK Programme Coordinators.

**6.1.2 Audit Objectives**

This audit was conducted to assess whether the University:

- Ensured effective utilisation of the State Government grants;
- Imparted quality agricultural education to the student community;
- Promoted Research activities on new emerging areas and whether research projects were completed on time; and
- Effectively performed extension activities and dissemination of technologies to farmers.

### **6.1.3 Scope and Methodology**

This audit was conducted between June 2019 and February 2020 covering the period from 2016-17 to 2018-19 to assess the audit objectives with reference to the TNAU Act, 12<sup>th</sup> Five Year Plan document, Vision document, guidelines of Indian Council of Agricultural Research (ICAR) and National Institution Ranking Framework (NIRF).

Audit test checked the records in the Government Secretariat, Directorate of Agriculture, Office of Registrar, TNAU and four<sup>1</sup> out of 14 constituent colleges, six<sup>2</sup> out of 39 Research stations and four<sup>3</sup> out of 14 KVKs which were selected based on judgmental sampling method. A survey was conducted through questionnaire among 590 out of 693 final year UG and PG students of four constituent colleges and five affiliated colleges under the control of TNAU to assess the extent of infrastructure facilities and career opportunities. The feedback of 50 farmers in each of the four selected KVKs was also obtained to assess the effectiveness of the activities of KVKs in imparting latest developments in agriculture to farmers. Audit scope, coverage and methodology were discussed in the Entry Conference with Agriculture Production Commissioner and Principal Secretary to Government (APC) held on 11 June 2019. Audit findings were also discussed with APC in Exit Conference on 30 June 2020 and their views were duly considered and incorporated in the report appropriately.

### **6.1.4 Good Practices adopted by TNAU**

Audit observed that the following good practices have been adopted by the University to benefit the farming community.

- Development and release of mobile apps viz., Paddy Expert, Banana Expert, Ragi Expert, Coconut Expert, etc., to provide free of cost information about the symptoms, management and control of diseases affecting the crops, climatic conditions, etc., to farmers.
- Dedicated YouTube channel - TNAU TV for dissemination of agro technology videos for the benefit of farmers and students.
- India's first Insect Museum inaugurated in TNAU (March 2018) to showcase rich diversity of insects from all over the country. It provides complete insight about the magic world of insects; serves as reference point on insect identification for researchers and benefits farmers on crop pests, their damage symptoms and natural enemies.

Audit scrutiny of records relating to core activities of the University revealed the following:

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<sup>1</sup> (i) Agriculture College and Research Institute, Coimbatore, (ii) Horticulture College and Research Institute, Periyakulam, (iii) Forest College and Research Institute, Mettupalayam, (iv) Agricultural Engineering College and Research Institute, Kumulur.

<sup>2</sup> Aduthurai, Athiyanthal, Cuddalore, Ooty, Tindivanam and Vamban.

<sup>3</sup> Arupukkotai, Needamangalam, Thirupathisaram and Tindivanam.

### 6.1.5 Financial Management

As per TNAU Act, 1971, Tamil Nadu Government releases a non-lapsable lump sum grant equal to the net expenditure of the University every year. The net expenditure should be arrived at after adjusting the receipts of the University.

**Table No. 6.1: Receipts, Expenditure and excess Grants**

Source of Funds	2016-17				2017-18			2018-19		
	OB	Receipt	Exp	CB	Receipt	Exp	CB	Receipt	Exp	CB
State Grant Plan and Non Plan	31.80	405.92	434.86	42.89	465.12	442.68	108.78	431.63	563.27	26.51
University Receipts**		40.03			43.45			49.37		
Other Agencies*	87.13	101.09	123.29	64.93	109.37	117.15	57.15	110.73	100.47	67.41
<b>Total</b>	<b>118.93</b>	<b>547.04</b>	<b>558.15</b>	<b>107.82</b>	<b>617.94</b>	<b>559.83</b>	<b>165.93</b>	<b>591.73</b>	<b>663.74</b>	<b>93.92</b>

(Source: Details furnished by TNAU) (OB – Opening Balance; Exp – Expenditure; CB – Closing Balance)

\*GOI funding; ICAR funding; Private and foreign agencies funding for research projects.

\*\*University receipts such as tuition fees, admission fees, etc., need to be adjusted against State grant.

The Public Accounts Committee (PAC) had examined the Report of the Comptroller and Auditor General of India (CAG) for the year 1984-85 and had pointed that the University did not take into account the unspent balance of previous year while calculating budget estimates for ensuing year which resulted in excess drawl of grant. It recommended that the State Government should release only such amount as was likely to be spent by the University during the year. The issue relating to release of excess grant amounting to ₹ 2.73 crore continued upto 2005-06 and hence non-adherence to the recommendation of PAC was again pointed by the CAG in Audit Report<sup>4</sup> of 2007.

The State Government did not take into consideration the unspent balances of previous year before release of funds in the subsequent years during 2016-17 to 2018-19 also. The State Government continued to release grants without considering the unspent balances of ₹ 42.89 crore, ₹ 108.78 crore and ₹ 26.51 crore during the financial year 2016-17, 2017-18 and 2018-19 respectively, resulting in excess release of grants to the University. This also led to blocking of Government funds outside the Government account.

APC in the Exit Conference agreed to take up the matter with the University officials and rectify the issue at the earliest.

#### 6.1.5.1 Accounting System

As per Section 12 of TNAU Act, 1971, University shall prepare Annual Accounts and Balance Sheet every year. Finance Commission recommended (September 2003) maintenance of accounts in double entry system and the University decided to implement the system from April 2004. A comment on non-preparation of balance sheet and non-maintenance of accounts in double

<sup>4</sup> Paragraph No. 3.5.9.1 of CAG's Audit Report (Civil) for the year ended 31 March 2007.

entry system was pointed out by the CAG in Audit Report<sup>5</sup>. Despite this, TNAU failed to maintain accounts in double entry system for the last 15 years and continued with preparation of Receipts and Payments accounts under single entry system.

Government of Tamil Nadu (GoTN) accepted (June 2020) the audit observation and stated that a Memorandum of Understanding (MOU) with M/s. ITI Limited, Lucknow has been entered (November 2017) for providing a software for a complete accounting system. It was informed that the accounts in double entry system would be prepared from 2020-21 onwards. The fact, however, remains that it has been delayed for more than two years, beyond the agreed time schedule for completion of the development of software as per MOU of 120 days.

### **6.1.6 Education**

#### **6.1.6.1 Admission**

According to NIRF guidelines of ranking, the total sanctioned strength and the actual number of students enrolled in the institution for UG and PG programmes are important criteria to assess the performance of an institution.

#### **Admission to Undergraduate Courses**

TNAU admitted the students for 12 UG courses in 14 constituent colleges through counselling process. The number of applications received, sanctioned strength and the number of students admitted through counselling are as follows:

**Table No. 6.2: Admission to Undergraduate Courses**

SL No	Year	Number of applications received	Admission through counselling			Admission through NRI			Admission through industrial sponsored		
			Sanctioned strength	Students admitted	Vacancies after final counselling	Sanctioned strength	Students admitted	Vacancies after final counselling	Sanctioned strength	Students admitted	Vacancies after final counselling
1	2016-17	36,316	1,220	1,133	87 (07)	200	99	101 (51)	200	114	86 (43)
2	2017-18	48,996	1,233	1,155	78 (06)	200	107	93 (47)	200	125	75 (38)
3	2018-19	32,361	1,287	1,133	154 (12)	200	88	112 (56)	200	112	88 (44)

(Source: Details furnished by TNAU); (Figures in bracket indicate percentage of vacancy)

It may be seen from the above that the sanctioned strength of admissions through counselling, was increased from 1,220 in 2016-17 to 1,287 in 2018-19 based on the number of applications received and infrastructure created. However, Audit observed that the University was unable to fill the quota of the original sanctioned strength as detailed below:

- Though the sanctioned strength for admission through counselling increased every year, vacancy position increased from 06 to 12 *per cent* during 2017-18 to 2018-19 in the constituent colleges.
- The vacancies in the Non-Resident Indian (NRI) category ranged between 47 and 56 *per cent* during 2016-17 to 2018-19 indicating that the institution was not a preferred choice of NRIs.

<sup>5</sup> Paragraph No. 3.5.9.6 of CAG's Audit Report (Civil) for the year ended 31 March 2007.

- The admission under industrial quota was applicable to students nominated by industries registered with Agri Business Consortium based on Memorandum of Understanding with TNAU. These registered industries also agreed to support significant research programmes of vital interest to agriculture and allied industries undertaken by TNAU. It is an important linkage to ensure sharing of knowledge and research between University and agricultural industries. However, audit observed that vacancies in industrial quota ranged between 38 and 44 *per cent* during 2016-17 to 2018-19 respectively.

GoTN replied (June 2020) that sliding system<sup>6</sup> of admission was introduced by TNAU from 2018 to give preference to merit wherein candidates opt for choice of college and course till the completion of counselling. As the candidates opt out of the allotted college or course after the counselling, the vacancies remained. It was also stated that the allotment of seats under NRI and Industrial quota has been reduced from 200 to 140 from 2019-20. It was informed that efforts would be made to improve the admission process by obtaining feedback from other Universities.

**It is recommended that TNAU fix the final date for opting out of sliding system before the end of counselling dates so that the vacancies could be filled up by other eligible candidates.**

#### **6.1.6.2 Results**

##### **Undergraduate Programme**

As per TNAU Vision 2030, career guidance, workshops etc., are to be organised by the Director of Students welfare and greater emphasis is to be given to higher education. The number of students successfully completing graduation and those qualifying Junior Research Fellowship (JRF) are essential parameters for ranking the institution.

It was seen that out of 3,616 students admitted during 2013-14 to 2015-16, only 2,858 students (79 *per cent*) continued the course till the final year. 21 *per cent* of the students left the course after admission. The pass percentage of candidates in the UG programme reduced from 94 in 2016-17 to 79 in 2018-19 as detailed below:

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<sup>6</sup> Sliding system is followed after each counselling based on vacancy. Re-allotment of preferred degree course or college will be done based on the choice and willingness of the candidates, subject to merit and communal reservation policy.

**Table No. 6.3: Pass percentage of Undergraduate students**

Period of passing the candidates	Sanctioned strength for admission 2013-14 to 2015-16	No. of students admitted during 2013-14 to 2015-16	No. of final year students (percentage to admitted)	No. of passed students (percentage to number of students admitted)	No. of students who wrote ICAR entrance examination	No. of students who got JRF (Percentage to students appeared for ICAR examination)	No. of students got enrolled in PG courses (Percentage to students appeared for ICAR examination)
2016-17	1,322	901	895 (99)	848 (94)	566	16 (3)	34 (6)
2017-18	1,481	1,358	847 (62)	810 (60)	654	33 (5)	50 (8)
2018-19	1,721	1,357	1,116 (82)	1,075 (79)	830	32 (4)	46 (6)
<b>Total</b>	<b>4,524</b>	<b>3,616</b>	<b>2,858 (79)</b>	<b>2,733</b>	<b>2,050</b>	<b>81</b>	<b>130</b>

(Source: Details furnished by TNAU)

The number of students who qualified for JRF was only in the range of three to five *per cent* and the number of students admitted through ICAR quota was in the range of six to eight *per cent* of the candidates who attended the qualifying examination.

GoTN replied (June 2020) that special coaching drive for ICAR examination was conducted during 2019-20 and 60 students cleared the examination.

**It is recommended that the University analyse the reasons for higher percentage of dropouts and take appropriate corrective action. As the University rankings are affected by the number of students qualifying for ICAR's JRF, the University may focus on improving the percentage of students qualifying for JRF.**

#### **6.1.6.3 Revaluation**

As per Para No.12.7 of Under-Graduate Rules and Regulations 2015 (semester system) of TNAU, a student can apply for re-valuation/re-totalling to the Controller of Examinations on payment of a fee of ₹ 600 per subject.

A mention was made in the CAG's Audit Report for the year 2007 (Para No.3.5.6.3) about change in marks scored after re-valuation in 1,612 out of 1,713 (94 *per cent*) answer papers for the academic years 2005-06 and 2006-07. It was recommended to revamp the valuation system of the University.

The position of revaluation during 2016-17 to 2018-19 is detailed below:

**Table No. 6.4: Revaluation of marks in Undergraduate examination**

Year	Total number of UG examination papers evaluated	Total number of papers with fail marks	Numbers of papers registered for re-valuation	Number of papers passed after re-valuation	Percentage
2016-17	1,55,070	12,491	4,033	1,654	41
2017-18	1,79,226	17,378	5,928	2,578	43
2018-19	2,03,531	30,780	6,308	2,649	42
<b>Total</b>			<b>16,269 (27)</b>	<b>6,881</b>	<b>42</b>

As seen from the above, 42 *per cent* of the examination papers registered for re-valuation were declared as passed after completion of re-valuation. This indicated that either the valuation in the first instance was not done with due care or the re-valuation was done in a very liberal manner. The valuation system of the University had not been revamped despite being pointed out in

earlier Audit Report. This raises doubt on the credibility of the evaluation system.

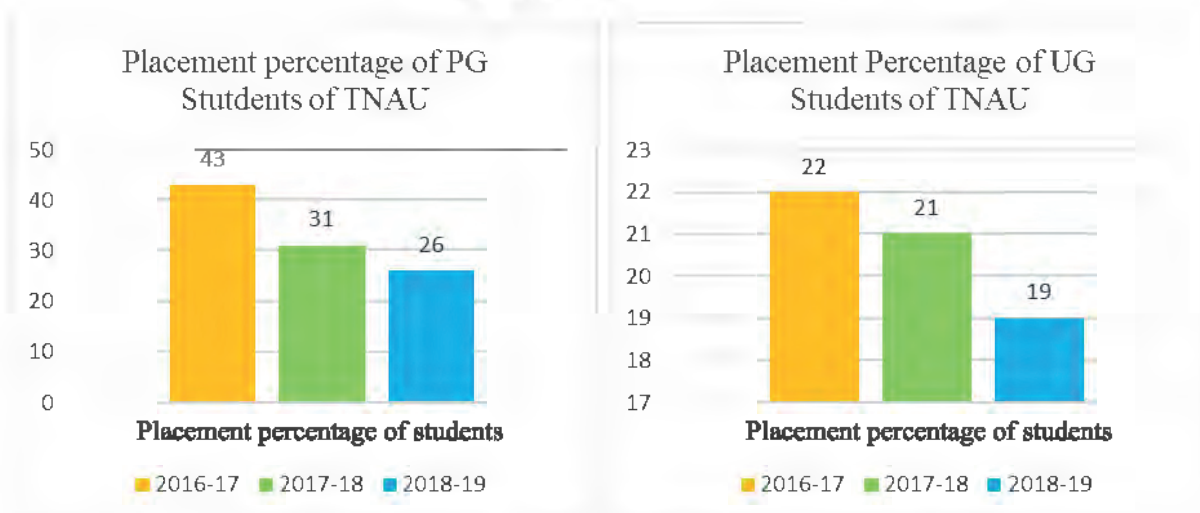
GoTN accepted the audit observation (June 2020) and stated that the first evaluation and revaluation would be strictly on the basis of standardised answer keys.

#### 6.1.6.4 Placements

Employment after completion of Graduation and Post-graduation is a significant criterion for students while selection of college and it also reflects the quality of education, perception of industries while choosing the college for campus selection. TNAU Vision 2030 document also emphasised that the University would provide wholesome education not only to impart knowledge but also to make the graduates employable.

Audit observed that, as against the placement of 551 UG/PG students during 2010-11, the placement was 390 out of 1,343 students registered for placement during 2016-17 and further reduced to 334 out of 1,594 students during 2018-19.

The number of students placed for employment reduced from 22 to 19 *per cent* in respect of UG and 43 to 26 *per cent* in PG courses during the period 2016-17 to 2018-19 as illustrated in the chart:



It was seen that 52 to 60 *per cent* of the UG students were neither placed for employment nor admitted to PG courses. PG students who were not placed or did not pursue higher education increased from 26 to 53 *per cent* during 2016-17 to 2018-19 as detailed in Annexure 4.

Thus, it could be seen that the placement percentage was on the decreasing trend for both UG and PG students resulting in non-achievement of objective of TNAU Vision 2030 to improve the employment opportunities. The decreasing trends in placements is also affecting the reputation of TNAU and also NIRF ranking.

GoTN accepted the contention of audit (June 2020) and stated that efforts were being made to approach many organisations for placement of students.

#### **6.1.6.5      *Infrastructure and Faculty for imparting quality education***

The National Academy of Agricultural Sciences in collaboration with ICAR organised Agricultural Science Congress on “Transforming Agricultural Education for Reshaping India’s Future” in 2013 and identified the gaps viz., (i) poor quality of education due to obsolete and inadequate equipment and laboratory facilities (ii) Depleting number and quality of faculty members (iii) lack of adequate skill and lack of evaluation etc.

Scrutiny of records revealed that there was shortage of Laboratory equipment, faculty, etc., as discussed in the subsequent paragraphs:

#### **Shortage of Laboratory equipment**

Fifth Deans’ Committee Report (February 2017) prescribed the minimum requirement of laboratory equipment for each course to impart quality education. It was observed that three out of four test checked colleges had shortage of laboratory equipment in the range of 14 to 97 *per cent* except in the Irrigation and Drainage laboratory (**Annexure 5**).

The post-harvest management, vegetables processing and preservation laboratory in the Periyakulam Horticulture College; forest product and tree improvement and wildlife science laboratory in the Mettupalayam Forestry College had shortage of 82 to 97 *per cent* of equipment which led to inadequate practical exposure to the students.

GoTN stated (June 2020) that the laboratory equipment was procured in 2019-20 in one college and procurement was in progress in other colleges. The fact however remains that inadequate laboratory equipment led to declining quality of education to students during 2016-17 to 2018-19.

#### **Shortage of faculty**

The vacancies in the cadre of Professors, Associate Professors and Assistant Professors in the 14 constituent colleges ranged between 15 and 22 *per cent* of the sanctioned strength during 2016-17 to 2018-19. The vacancy position of test checked constituent colleges were as detailed below:

- 32 faculty posts for the three new colleges commenced during 2014-15 were sanctioned after two years (April 2017) and these posts were yet to be filled up (December 2019). These colleges functioned by deputing faculty from other constituent colleges which overburdened limited faculty available in those colleges.
- 27 teaching staff were deputed to affiliated colleges to oversee the administrative and management activities of those colleges during 2016-17 to 2018-19.
- There were no teaching staff for Plant Protection, Post-harvest and Natural Resource Management subjects as against the minimum requirement of six, four and eight respectively in Horticulture and Research Institute (HC&RI), Periyakulam.

Thus, vacancies in sanctioned posts of faculty, delay in filling up of sanctioned posts, diversion of faculty for administrative functions and non-availability subject matter specialists hindered imparting quality education to students.

GoTN accepted the audit observation (June 2020) and stated that proposal has been submitted to Government to fill all the vacancies early.

#### **Faculty student ratio**

Faculty student ratio with emphasis on permanent faculty is one of the criteria for assessment of university ranking. Fifth Deans' Committee Report (February 2017) emphasised that non-availability of teaching faculty adversely affects the quality of education, research and extension activities which are intended to benefit rural population dependent on agriculture, besides creating a negative perception about the University.

Deans' Committee Report (February 2017) prescribed standards for establishing each category of college and minimum teaching staff strength required for each Division/Department of the college. As against the minimum staff requirement of 283 for the existing number of students (Annual Report - 2017-18) in the four test checked colleges, the sanctioned strength of faculty was 106 (37 *per cent*). Audit also observed that there were vacancies in the sanctioned strength and the actual available strength of faculty was 82 (29 *per cent* of requirement).

GoTN accepted the audit observation (June 2020) and stated that proposal has been submitted to Government for creation of additional entry level teaching staff.

#### **6.1.6.6 Accreditation**

The accreditation Board of ICAR provides assurance and improves academic quality in agriculture and allied sciences through the accreditation process. The Board accorded independent accreditation to State Agricultural University, Agricultural colleges including constituent and affiliated colleges and to academic programmes *viz.*, UG, PG and Ph.D Degree programmes based on the recommendations of Dean's Committees and Broad Subject Matter Area (BSMA) Committee. Government of India (GOI) also made accreditation as mandatory requirement for all State Agricultural Universities by 2016-17 and linked it for release of grants for education quality assurance. TNAU is entitled to admit students under All India Quota through ICAR in the constituent colleges only after the receipt of accreditation to the University.

The details of accreditation of the University, colleges and courses under TNAU are as detailed below:

- The accreditation for the University pertaining to two academic years, *viz.*, 2016-17 and 2017-18 was received in April 2017 and for a five year period from 2018-19 to 2022-23, in October 2018.

- Three out of 11 constituent colleges<sup>7</sup> functioned during 2016-17 to 2018-19 without accreditation as they offered courses which were not stipulated in ICAR guidelines.
- Eight out of 12 UG courses during 2016-17 and 2017-18 and five out of 12 UG courses during 2018-19 in these 11 constituent colleges were not accredited as the University designed its own course curricula for these programmes.
- The three new colleges viz., Agriculture College and Research Institute at Thiruvannamalai, Kudumiyannalai and Eachangottai, which conducted UG courses, were eligible to apply for accreditation during 2018-19 but the same was not applied in that year.
- All PG / Ph.D programmes in the 10 constituent colleges under TNAU were not eligible for accreditation as they were not following BSMA regulations of Semester system and instead followed Trimester System of education during the period 2016-17 to 2018-19.
- Deans' Committee report (February 2017) highlighted that the UG Programme in Agri-business was not viable due to absence of core faculty and employment opportunities. Despite the same, TNAU admitted students for Agri-business programme during 2017-18 (42 students) and 2018-19 (41 students) without accreditation.

Absence of accreditation for the University in 2016-17 and obtaining of accreditation for 2018-19 in October 2018 led to non-admission of 147 and 134 UG students under All India Quota, under ICAR category during these two years. The delay in accreditation of TNAU led to non-obtaining of grants of ₹ 9.1 crore during 2016-17 from ICAR. This had also contributed in reduction of ICAR ranking as discussed in **Paragraph No. 6.1.9.2.**

GoTN stated (June 2020) that the pattern of examination has been changed to semester system from 2019 onwards and accreditation obtained. It was also stated that process of accreditation of new colleges would be initiated. The fact, however, remains that in the past many students completed their courses from these institutions without accreditation credentials.

#### **6.1.7 Research Activities**

As per TNAU Act, 1971, agriculture research organisations were established to undertake basic research on problems primarily relating to agriculture and allied sciences. Vision 2030 document envisages monitoring of progress of research by Heads of the Department, Deans, Directors and Vice Chancellor periodically. The research results are disseminated by publishing the findings in National and International journals and Agriculture magazines. The research findings are incorporated in Crop Production Guide to update the stock of technological advancements for increasing the agricultural production and productivity.

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<sup>7</sup> Out of 14 colleges, three colleges were eligible to apply for accreditation only in 2018-19 as they did not have at least one batch of students passed out during 2016-17 and 2017-18.

In NIRF, ranking Research and Professional Practice is an important parameter for assessment of university ranking by NIRF with a weightage of 30 *per cent*. ICAR ranking also give 30 *per cent* weightage to research activities.

#### **6.1.7.1 Research Projects**

The scientists of the university formulate need based sub-projects and prioritise them based on the intensity of the problem and availability of manpower. Apart from the University Research Projects, TNAU carried out All India Coordinated Research Projects with grants from ICAR.

TNAU undertook 453 University Research Projects during 2016-17 to 2018-19. Of these, 126 projects were completed and balance 327 projects were in progress. It was observed that completion reports and publication of research papers were finalised for 15 out of 126 completed projects. Out of 327 ongoing projects, 62 projects were continued beyond the due date and four projects were discontinued due to low performance and poor germination of seeds. TNAU also undertook 442 Externally Funded Research projects during 2016-17 to 2018-19, out of which 284 projects were completed and balance 158 projects were in progress. It was observed that 89 out of 158 projects were continued beyond the due date and the delay ranged between one month to 36 months.

It was also observed that TNAU could obtain only 11.52 out of 100 marks in NIRF ranking for the year 2019 in Research parameter.

GoTN replied (June 2020) that the publication of Research papers (final stage) of the project took one to two years which delayed the completion of research projects. It was assured that the projects would be monitored regularly. The fact, however, remains that TNAU did not monitor the research studies periodically as envisaged in the Vision 2030 document for early dissemination of research findings and this had also impacted TNAU ranking adversely.

#### **6.1.7.2 Non-commencement of research**

GoTN approved (October 2015) research<sup>8</sup> study on yield sustainability and sanctioned ₹ nine crore for completion of research within one year (October 2016). The project aimed to maximise the crop yield thereby enhancing the farmers' income. The project included procurement of Rhizotron machines<sup>9</sup>, civil works for housing the machinery and a laboratory.

Based on the recommendations (March 2016) of the purchase committee, TNAU imported (February 2017) three units of Rhizotron from Canada on single quotation at a cost of ₹ 6.50 crore. The machinery was installed (August 2018) after completion of building works. TNAU incurred an expenditure of ₹ 9.17 crore.

After installation, the machinery could not be operated as each unit required 150 KVA electrical power. A separate electrical line was provided for one unit

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<sup>8</sup> Plant Health Manipulation through Innovative tools and Techniques – Rhizotron - based Plant-Soil-Microbe interaction studies.

<sup>9</sup> M/s. Conviron, Canada - only global firm to develop custom - designed large sized Rhizotron facility.

of Rhizotron in November 2018 and research operations commenced in February 2019. Establishment of a separate transformer was sanctioned (July 2019) for ₹ 3.15 crore and tender specification was finalised (May 2020). The other two units are idle for want of adequate power supply since August 2018.

Thus, TNAU failed to ascertain the requirement of adequate power supply to operate these machineries for undertaking research prior to import of machinery leading to non-achievement of the objective of the research besides blocking of fund of ₹ 4.33 crore towards idle machinery.

GoTN accepted (June 2020) the audit contention and assured that establishment of transformer would be completed within four months.

#### **6.1.7.3      *Registration under Protection of Plant Varieties and Farmers Rights Act, 2001***

Registration under Protection of Plant Varieties and Farmers Rights Act, 2001 was required to establish an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants.

The Act also envisaged that compliance would stimulate investment for research, development of new plant varieties and ensure availability of high quality seeds and planting material to the farmers.

Audit observed that, after the enforcement of the Act, 109 agricultural crop varieties were released by TNAU, of which 30 varieties (28 *per cent*) were registered (October 2019) under this Act. Registration of balance 79 varieties<sup>10</sup> with the concerned authority was pending. Delay in registration of plant varieties deprived the farmers of high quality seeds and planting materials.

GoTN accepted (June 2020) the audit observation and stated that proposals for 31 varieties had been finalised and would be submitted for registration. It was assured that efforts would be made to finalise the proposals for the balance 48 varieties at the earliest.

#### **6.1.7.4      *Patent***

Section 46 (2) of TNAU Act, 1971 stipulated that all rights in respect of any investigations carried out by the University and patents obtained, shall be the absolute property of the University. The Intellectual Property Management Cell (IPMC) in the Department of Agricultural Economics, TNAU is responsible for filing of the patent applications, publications, patent examination and obtaining the patents from GOI.

The University developed 73 technologies / machines / equipment for which applications were filed for securing patents rights. Out of 73 applications<sup>11</sup> filed, TNAU was able to secure patents in respect of 11 applications only, 41 applications were deemed to be abandoned by GOI due to filing of incomplete

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<sup>10</sup>      Rice (17), Sorghum (3), Cumbu (1), Ragi (3), Small millets (4), Red gram (1), Black gram (11), Green gram (4), Cowpea (3), Soyabean (1), Avarai (1), Groundnut (9), Sesame (3), Castor (2), Cotton (7), Sugarcane (5) and Forage crops (4).

<sup>11</sup>      22 applications upto 2010; 41 applications 2011 - 2015; 10 applications 2016 - 2019.

specifications/documents and 21 applications were pending<sup>12</sup> with GOI as of December 2019. Audit scrutiny of records relating to 41 unsuccessful applications revealed that the University did not initiate follow up action for timely re-submission of required documents/applications, with complete specification/responses, resulting in these applications becoming time barred.

According to Section 9 (1) of the Patent Act, 1970, where provisional specification for patent was filed, complete specification shall be filed within 12 months, otherwise the patent shall be deemed to be abandoned. As per Section 21 (1), where the patent application has been returned by the Controller, the application shall be re-submitted with necessary requirements. It was seen that 24 patent applications were abandoned due to non-filing of complete specification or non-furnishing of reply to the application returned by the authority.

According to Section 11 B of the Act, patent application shall be examined based on the applicant request submitted within 48 months. It was seen that 11 applications were deemed to be withdrawn as TNAU did not make a request for patent examination within 48 months. Further, patent application for multipurpose machine for roto tilling and bush cutting was withdrawn by TNAU for reasons not on record.

As per Section 15 of the Act, if the Controller is satisfied that patent application or specification did not comply with the provisions of the Act, the same can be refused. Five patent applications filed by TNAU were refused by the Controller under Section 15 of the Act as the applications did not provide the complete specifications of the patent applied for.

In order to ascertain the level of knowledge and awareness of Intellectual Property Rights / patenting process a survey was conducted among 302 final year students of the constituent colleges of TNAU. The survey revealed that 162 out of 302 students (54 *per cent*) did not have sufficient knowledge about the Intellectual Property Law on patents and patenting process of new technology and 44 out of 302 students (15 *per cent*) though aware of the Intellectual Property Law on patents did not know about the process of patenting.

Thus, failure of TNAU to file complete specification and to re-submit the patent applications with the required details led to non-receipt of 41 out of 73 patents between 2006 and 2015, despite efforts to develop new technologies and machineries.

GoTN stated (June 2020) that the inventors failed to furnish replies to the remarks of the patent office on time. The fact, however, remains that IPMC did not effectively co-ordinate with the inventors who were scientists of TNAU to ensure furnishing of replies within due dates.

As recommended by Audit, APC in the Exit Conference agreed to impart education to students on patent processes, conditions to be fulfilled and various time lines with the help of Intellectual Property specialist.

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<sup>12</sup> More than five years – 11 applications; Between five and two years – 4 applications; Less than two years – 6 applications.

#### **6.1.7.5 Non-collection of royalty**

The technical know-how of latest technologies developed by TNAU by way of hybrid varieties of rice, maize, equipment, etc., was transferred to private players on payment of one-time licence fee and annual royalty at a prescribed percentage of their sales turnover. The transfer of technology was made through Memorandum of Understanding (MOU) between TNAU and private companies. As per the MOU the licencees need to furnish their Annual Accounts and sales turnover within three months of completion of the financial year to the Director of Agri Business Development, TNAU and the royalty amount had to be paid within 30 days of finalisation of accounts.

Audit noticed that the Director of Agri Business Development failed to watch the receipt of annual accounts from the licencees and to ascertain and collect the dues to the University promptly. It was seen that 30 new technologies and six hybrid seeds were commercialised by 31 private companies during the period from 2009 to 2017. Of the same, no royalty was paid by 26 companies till date.

#### **6.1.8 Extension activities**

The main functions of Directorate of Extension (TNAU), *inter-alia*, include dissemination of modern/latest technologies to farmers for improving productivity in agriculture and allied sciences, imparting need based training to farmers and extension programmes with the help of fourteen Krishi Vigyan Kendras (KVKs)

In addition to scrutiny of records of KVKs, a feedback of 50 farmers in each of the four selected KVKs was also obtained to assess the effectiveness of the activities of KVKs in imparting latest developments in agriculture. Audit observations are detailed in subsequent paragraphs:

##### **Soil Test**

ICAR parameter for ranking under the extension and outreach activities through KVK, included analysis of one lakh soil samples every year to assess the soil nutrients and to recommend best lime and fertilizer for the soil.

As against the requirement of one lakh soil samples every year, soil test conducted by the 14 KVKs in the State ranged between 4,463 and 5,760 during 2016-17 and 2018-19 respectively. The reason for shortfall in testing was unwillingness of farmers to bear the cost of testing<sup>13</sup>. Farmers' Survey in four KVKs revealed that 19 farmers required assistance of KVK in pest control method and diagnostic visit by scientists to their farms.

GoTN accepted (June 2020) the audit observation and stated that efforts would be made to subsidise the cost of tests to the benefit of farmers.

##### **Training**

- KVKs organise need based training to farmers to update their knowledge and skills in modern agricultural technologies related to technology assessment, refinement and demonstration and training of

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<sup>13</sup>

For testing major nutrients in soil - ₹ 100 and micro nutrients - ₹ 150 per sample.

extension personnel, to orient them in the frontier areas of technology development. As against the target of 85 and 45 courses, training was imparted for 69 and 34 courses to farmers during 2016-17 and 2017-18 respectively in KVK Needamangalam. The shortfall in training was 19 and 24 *per cent* during 2016-17 and 2017-18 respectively. Consequently, as against the target of 1,775 farmers, 1,581 farmers were trained by the KVK, Needamangalam during 2017-18.

- In Tirupathisaram KVK there was shortfall of training of 573 farmers as against the target of 2,096, during 2018-19.
- Survey results revealed that On Farm Training and Front Line Demonstration was not conducted in the farms of 115 out of 200 farmers (58 *per cent*) in four KVKs<sup>14</sup>. On Farm Training on Tolerant paddy varieties was not conducted in the fields of 39 farmers in Tindivanam KVK. In Arupukottai KVK, training on cultivation of rice variety was not conducted in the fields of 34 farmers and quality seeds were not supplied to 26 farmers. 21 farmers<sup>15</sup> stated that they were not provided with animal health care and poultry farming techniques by KVKs.

KVKs stated that vacancies in the post of subject matter specialists as the reason for shortfall in conduct of trainings.

GoTN accepted (June 2020) the audit point and stated that steps would be taken to minimise shortfalls in future.

### **Extension programme**

KVKs conduct various programmes *viz.*, advisory services, diagnostic visits, scientist visit to farmers' field, farmers' seminar, exposure visits, etc., to create awareness about improved technologies to larger masses.

It was noticed from the test checked Needamangalam KVK that the achievement of Extension programmes was 741 and 400 as against the target of 983 and 1,204 during 2016-17 and 2017-18 respectively, with a shortfall of 25 *per cent* and 67 *per cent* in each of the years. Shortfall in extension programme impacted in the creation of awareness of improved varieties.

GoTN accepted (June 2020) the audit contention and stated that the proposed activities in the action plan could not be completed due to insufficient funds. It was assured that steps would be taken to obtain the budget and complete the activities as per action plan. The fact, however, remains that Government grant had not been fully utilised during 2016-17 to 2018-19 as discussed in **Paragraph No. 6.1.5.**

<sup>14</sup> Arupukottai-34; Needamangalam-24; Tindivanam-39; and Thirupathisaram-18.

<sup>15</sup> Arupukottai-6; Needamangalam-2; Thirupathisaram-2; and Tindivanam-11.

**6.1.8.1 Non-conducting of Skill development training to rural youth**

GoTN sanctioned (March 2015) ₹ 20 crore<sup>16</sup> for establishment of Agricultural Skill Development Centre to provide one year certificate course to 10,000 rural youths in a period of 10 years. The course intended to provide skill development in maintenance and repairs of modern agricultural machinery. GoTN released (July 2015) the first instalment of ₹ 4.49 crore, but TNAU utilised only ₹ 0.31 crore during 2015-16. GoTN released (June 2016 and June 2017) the balance amount of ₹ 3.01 crore. TNAU completed the procurement of field operated equipment and electrical machinery for imparting training viz., tractors, CNC lathe, drilling machinery, wood working machinery, etc., (expenditure of ₹ 7.50 crore) in 2018-19 with delay of more than two years. The procured electrical machinery (costing ₹ 1.70 crore) could not be operated with the existing power supply of 20 KVA and hence a proposal was submitted (August 2019) for installation of separate electricity line and transformer for 120 KVA, to the University.

Thus, failure to ascertain the power requirement to operate the procured machinery resulted in non-achievement of envisaged objective during the three-year period (July 2016 to June 2019) besides blocking of funds of ₹ 1.70 crore due to non-utilisation of procured machinery.

GoTN replied (June 2020) that short term skill development training programmes were conducted for trainees, farmers and college students during 2018-19 utilising field machinery which did not require power supply. It was stated that long term training would be imparted utilising the electrical machinery after availability of adequate power supply. The fact, however, remains that the objective of providing skill development training to rural youth in maintenance of modern agricultural machinery remained unachieved.

**6.1.8.2 Non-establishment of Water soluble fertilisers production unit**

Water Soluble Fertilisers (WSFs) offer a sustainable solution for farmers to increase crop yield and reduce fertiliser usage in fields. WSFs provide nutrients to plants in a controlled manner, protect soil against harmful effects of excess fertiliser. It is more economical, user and environment friendly and also ensures sustainable agricultural productivity.

GoTN sanctioned (July 2017) ₹ 5.31 crore for establishment of three pilot WSFs production units at Coimbatore, Madurai, Killikulam, with the aim of conducting skill development programmes to farm graduates and entrepreneurs for starting new industrial units at village / block levels. TNAU proposed to establish the production unit at Coimbatore within one year and in other two places during the second year. Scrutiny of records at TNAU revealed that the construction of housing structure at Coimbatore commenced in March 2018 and in other two places in June 2018 for an agreement value of ₹ 1.67 crore. In the meantime, tender for purchase of machinery was invited

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<sup>16</sup> Infrastructure development inclusive of training hall, Workshop etc., - ₹ 9.00 crore (GoTN funds); Equipment and Machinery ₹ 7.50 crore (GOI funds) and Contingencies ₹ 3.50 crore (funds would be provided by TNAU) at Agriculture Engineering College and Research Institute, Kumulur. TNAU decided to utilise the existing building and hence did not forward proposals for release of GoTN funds of ₹ 9.00 crore.

(December 2017 and February 2018) and procurement of machinery was completed in March 2018 incurring an expenditure of ₹ 1.43 crore.

TNAU realised (July 2018) that the finalised housing structure with 25 feet height was not adequate to install the machinery, which had height exceeding 25 feet. TNAU prepared an estimate for modification of the structure with the latest schedule of rates (2019-20) and work was awarded (November and December 2019) for ₹ 1.43 crore. The work was pending completion.

Thus, failure of TNAU to design the roof of the production unit on the basis of the height of the machinery at the initial stages led to delay in commencement of production of WSFs to achieve the objective of increasing crop yield, reducing fertiliser usage in fields and conducting skill development programmes to farm graduates, besides avoidable expenditure towards revision of design of building.

GoTN replied (June 2020) that proper care in planning would be undertaken on similar projects and assured that such discrepancies would not happen in future.

### **6.1.8.3 Non-promotion of water saving techniques among farmers**

GoTN accorded (September 2017) administrative sanction of ₹ 85.39 crore for implementation of On Farm Technology Assessment, validating and mainstreaming of promising crop husbandry practices to promote water savings techniques<sup>17</sup> in 66 sub-basins during six years *i.e.*, 2017-2023. For implementation of the Scheme under Phase-I, GoTN accorded financial sanction of ₹ 9.86 crore<sup>18</sup> for the financial year 2017-18.

Scrutiny of records revealed that TNAU spent (October 2019) only ₹ 3.24 crore<sup>19</sup> and ₹ 6.62 crore had remained unutilised, for more than two years. While TNAU incurred 92 *per cent* on Management cost (outsourcing of technical staff), it incurred only 27<sup>20</sup> *per cent* on the scheme components. Even though the project aimed to promote water savings technology, TNAU failed to spend 97 *per cent* of the allocation on drip irrigation facilities. The reason for non-utilisation of drip irrigation was due to fixation of 75 *per cent* subsidy to the scheme as against 100 *per cent* subsidy provided by GoTN for other schemes.

GoTN stated (June 2020) that provision of 100 *per cent* subsidy for drip irrigation was approved and efforts would be made to achieve the objective of the scheme at the earliest.

<sup>17</sup> Water savings techniques, *viz.*, Alternate Wetting and Drying Irrigation, Direct sowing of rice, drip irrigation, etc., provide improved service delivery through improved infrastructure and adoption of new technologies in Agriculture.

<sup>18</sup> Management cost - ₹ 1.08 crore; inputs - ₹ 3.30 crore; capacity building - ₹ 2.76 crore; drip irrigation - ₹ 2.30 crore and institutional charges - ₹ 0.42 crore.

<sup>19</sup> Management cost - ₹ 0.99 crore (92 *per cent*); inputs - ₹ 1.17 crore (35 *per cent*); capacity building - ₹ 1.00 crore (36 *per cent*); drip irrigation - ₹ 0.07 crore (03 *per cent*).

<sup>20</sup> (₹ 224.33 / ₹ 835.85 x 100 = 27 *per cent*).

#### **6.1.8.4 Establishment of Community Radio Station**

Twelfth Five Year Plan (2012-17) document highlighted that radio played a pivotal role in enriching the awareness level of farmers on farm technologies. The plan document proposed establishment of 28 Community Radio stations by TNAU across the State considering the benefits realised by the farmers through the existing Community Radio Station functioning at Coimbatore.

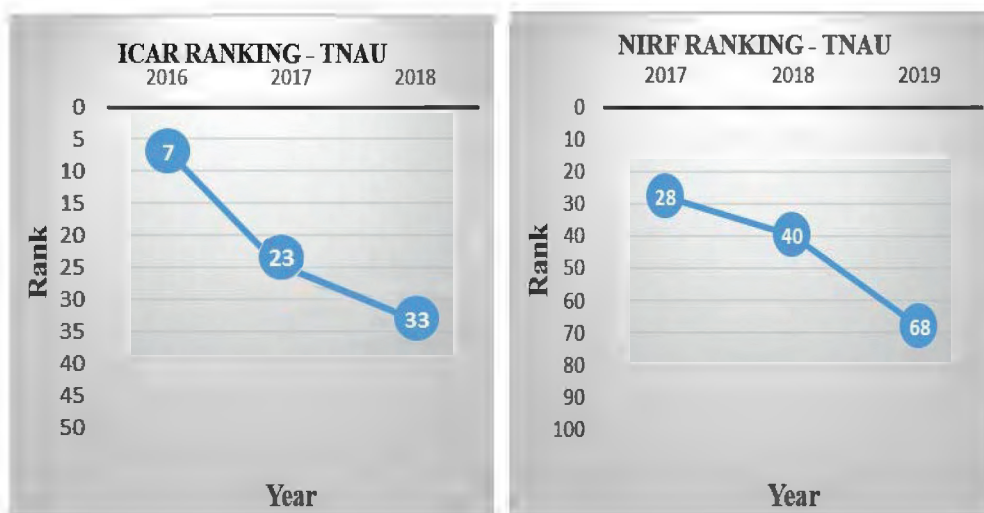
TNAU submitted (May 2015 to August 2017) proposals for establishment of Radio stations in 10 KVKs to the Ministry of Information and Broadcasting, Government of India. GOI directed (July 2019) for payment of annual spectrum charges of ₹ 23,500 but the same was not remitted till date due to absence of budget provision. The objective of enriching awareness level of farmers remained unachieved even after the lapse of 12<sup>th</sup> Plan period.

GoTN accepted the audit point and stated (June 2020) that non-establishment of community radio was due to absence of budget provision. The fact, however, remains that Government grant had not been fully utilised during 2016-17 to 2018-19 as discussed in **Paragraph No. 6.1.5.**

#### **6.1.9 Ranking**

##### **6.1.9.1 Ranking of the University**

The Agricultural Universities in the country are ranked annually by ICAR and also by Ministry of Human Resources and Development, GOI, through NIRF. The process of ranking helps Agricultural Universities in self assessing themselves on the quality of education and research and enhances their performance. Audit noticed that the ranking of TNAU by these two institutions has declined in the last three years, as represented below:



##### **6.1.9.2 Indian Council of Agricultural Research ranking**

State, Central and deemed Agricultural Universities are ranked annually by ICAR based on their performance in the preceding financial year. The ranking

envisaged weightage for Education<sup>21</sup> (40 *per cent*), Research<sup>22</sup> (30 *per cent*) and Extension and outreach<sup>23</sup> (30 *per cent*).

We observed that the ICAR ranking of TNAU had declined from seven in 2016 to 23 in 2017 and further reduced to 33 in 2018. The performance of the University on the aforesaid individual parameters could not be assessed as TNAU stated that the parameter-wise scores for ranking were not released by ICAR.

The following were the reasons for decline in ranking.

- Percentage of students admitted to PG courses through ICAR entrance examination with scholarships was less than five and without scholarship was less than 10 during 2017-2019.
- The number of research papers published in the ICAR approved National Academy of Agricultural Sciences database reduced from 304 (2016) to 110 during 2018.
- Absence of accreditation to the PG courses conducted by the University due to adoption of trimester as against the required semester system.
- In the revenue generation parameter, as against 30 *per cent* generated revenue of budget, TNAU could generate revenue of five to 10 *per cent* of Budget during 2017-19 and scored one out of 10 marks.

GoTN replied (June 2020) that action has been initiated to adopt semester system from 2019-20. It was stated that opening of new colleges led to reduction in percentage of revenue generation. It was also stated that research papers of TNAU were published in the database approved by NIRF. The fact, however, remains that performance of TNAU on various parameters like Education, Research, Extension and Outreach was not satisfactory, which resulted in continuous descending trend in TNAU ranking during the last three years.

### **6.1.9.3 National Institution Ranking Frame work**

This framework outlines a methodology to identify the broad parameters for ranking various universities and institutions. The ranking envisaged weightage for Teaching, Learning and Resources (30 *per cent*); Research and Professional Practice (30 *per cent*); Graduation outcome (20 *per cent*); Outreach and inclusivity (10 *per cent*) and Perception (10 *per cent*). The parameters for ranking of the educational institutions have been chosen in such a manner that these are equally relevant for various kinds of educational institutions and rankings were awarded based on the inputs given by the concerned Universities.

<sup>21</sup> Successful completion of course by UG students, quantum of admission of students in PG, Number of students completing their Ph.D thesis, Faculty merits and Accreditation, etc.

<sup>22</sup> Grading of research articles of faculty members, Patents granted, varieties released and new farm machinery and tools developed, etc.

<sup>23</sup> Meritorious Awards received by KVKs and Extension workers, supply of quality inputs, soil samples analysed and resource generated, etc.

It was seen that the scores obtained by TNAU decreased in respect of four parameters viz., Teaching, Learning and Resources (77.67 out of 100 in 2017 to 74.72 in 2019); Graduation Outcome (75.33 in 2017 to 69.31 in 2019); Outreach and inclusivity (from 63.48 in 2017 to 45.10 in 2019); Research and Profession Practice (12.56 in 2017 to 11.58 in 2019). In respect of fifth parameter viz., Perception, the score had marginally increased (3.53 out of 100 in 2017 to 11.52 in 2019). However, the performance in this parameter is poor as TNAU scored only 11.52 out of 100.

Ranking of TNAU was 28 in 2017, 40 in 2018 and reduced further to 68 in 2019 among 200 conventional universities in India. The reasons attributed by TNAU for decrease in the ranking were lack of global employment of students; inadequate patenting and low levels of peer perception (publicity/propaganda / feedback survey); shortfall in participation of agricultural scientists in seminars and visit of foreign university faculties.

GoTN assured (June 2020) that all efforts were being taken to increase the NIRF ranking.

Thus, TNAU needs to improve significantly in the fields of education, research and outreach activities to fulfil its vision of world's top university in agriculture and technology.

#### **6.1.10 Conclusion**

Compliance audit on the functioning of Tamil Nadu Agriculture University revealed the following:

- The shortcomings in maintenance of financial statements and release of excess grants of ₹ 178.18 crore during 2016-17 to 2018-19 continued despite being recommended by PAC indicating inadequate compliance and absence of corrective measures for more than 10 years. The available funds were also not utilised by the TNAU to achieve its objectives.
- There was shortfall of 06 to 12 *per cent* during 2016-17 to 2018-19 in admission of students in the constituent colleges, shortage of laboratory equipment, vacancies in faculty and inadequate student-faculty ratio which hindered imparting of quality education to students.
- Machinery purchased for research were lying unused for want of adequate power supply. Delay in completion of research projects, including publication of papers led to non-achievement of envisaged objectives. The patents were not filed properly and no system was in place to ensure collection of royalty.
- Non-publication of results of research projects deprived the farming community of the research benefits.
- There were gaps in implementation of extension activities including training and machinery procured for extension activities remained unutilised leading to non-achievement of the envisaged objectives.

Thus, these limitations in imparting education, completion of research and implementation of extension activities adversely impacted institutional

position and progress as the ranking of the institution continuously deteriorated over the three-year period leading to non-fulfilment of the mission and vision of the University.

#### **6.1.11 Recommendations**

In the light of Audit observations, the TNAU may

- Ensure effective utilisation of the Government grants and University receipts and adopt double entry system of accounting.
- Adopt an effective system to fill up all the sanctioned seats through counselling to enable enrolment of the eligible candidates.
- Strengthen the monitoring mechanism for completion of research activities in time to disseminate the research findings to the stakeholders promptly. Expedite effective completion of patent process for the new technologies.
- Accelerate completion of sanctioned infrastructure for adopting latest technologies in Extension activities and to provide adequate skill development training to the farmers and rural youth.
- Focus on improvement in various parameters to upgrade the ranking, and thereby attract more Students.

### **6.2 Delay in implementation of National Mission on Food Processing**

**Delay in release of grants and furnishing of Utilisation Certificates by Government of Tamil Nadu for the sanctioned projects resulted in non-release of Government of India grants of ₹ 16.26 crore. Thus, the intended objectives of development of food processing sector and promotion initiatives for skill development were only partially achieved.**

The Government of India, (GOI) launched (April 2012) a Centrally Sponsored Scheme – National Mission on Food Processing (NMFP) during 12<sup>th</sup> five-year plan (2012-2017). The basic objective of the Scheme was to augment the capacity of food processors to upscale their operations through capital infusion, technology transfer, skill up-gradation and handholding support.

The GOI issued (August 2012) detailed operational guidelines for implementation of NMFP Scheme. As per the guidelines, the funding pattern was in the ratio of 75:25 between GOI and Government of Tamil Nadu (GoTN). At National level, the Scheme was administered by Ministry of Food Processing Industries, whereas, at State level, the Scheme was to be administered by State Level Empowered Committee (SLEC). The GoTN further nominated (September 2012) Director, Agricultural Marketing and Agri-Business as State Mission Director and constituted various Committees<sup>24</sup> for project approval and monitoring as per the guidelines.

<sup>24</sup> NMFP projects were recommended by District Mission Committee under the Chairmanship of District Collector and cleared by Project Scrutinising Committee (PSC) / Project Technical Committee (PTC). These proposals were approved by SLEC based on recommendations from Project Approval Committee.

In 2012-13, GOI released funds in two instalments, i.e., ₹ 1.13 crore (April 2012) towards preparatory activities and ₹ 6.67 crore (September 2012) for main scheme activities. Since it was a new Scheme and the GoTN failed to make a provision as New Service in the Revised Estimates during the middle of 2012-13, a provision was made in final Supplementary Estimates (March 2013) and the corresponding State share of ₹ 2.60 crore could be released in March 2013, at the fag end of the financial year.

As per the guidelines, second instalment of the GOI share was to be released after 50 *per cent* utilisation of the sanctioned amount including State's share and on submission of Utilisation Certificate (UC) by the State.

Audit scrutiny of the records relating to allocation of budget and its utilisation revealed that there was inordinate delay in release of corresponding share by the GoTN and consequent implementation of the scheme. GOI withdrew (March 2015) the Scheme of NMFP assistance based on recommendations of 14<sup>th</sup> Finance Commission and instructed all the States to decide on continuance of the Scheme with State funds. An overview of projects approved and grants utilised till March 2015 is as follows:

**Table No. 6.5: Details of projects approved and amount utilised**

(₹ in crore)

Year	Amount released		Total amount released	No. of Proposals approved			Grant approved by SLEC	Total Grant utilised
	GOI	GoTN		DM C	PSC/PTC	SLEC		
2012-13	7.80	2.60	10.40	33	---	---	---	---
2013-14	--	--	--	58	66	29	13.24	2.39
2014-15	0.44	0.15	0.59	75	28	18	4.20	8.60
<b>Total</b>	<b>8.24</b>	<b>2.75</b>	<b>10.99</b>	<b>166</b>	<b>94</b>	<b>47</b>	<b>17.44</b>	<b>10.99</b>

(Source: Details furnished by the Department)

It was noticed that GOI had released ₹ 1.13 crore in April 2012 towards preparatory activities and ₹ 6.67 crore (September 2012) for main scheme activities, yet there were inordinate delays in carrying out physical preparatory works such as wider publicity for inviting proposals under NMFP, scrutiny of proposals, formation of NMFP cell etc., as a result of which the funds amounting to ₹ 2.39 crore could only be utilised till 2013-14.

There were delays ranging from one to 11 months in releasing first instalment of grants to entrepreneurs after approval of the projects by the SLEC due to delayed<sup>25</sup> forwarding of approval intimations to entrepreneurs. This led to delayed submission of required documents by the entrepreneurs. The delay in release of grants subsequently resulted in delay in utilisation of funds. GoTN submitted (September 2014) first UC for ₹ 7.01 crore after a delay of nearly two years from the date of sanction by GOI. The second and final UC of ₹ 10.99 crore was submitted by GoTN to GOI in May 2015. Due to non-receipt of UC within stipulated time for grants received in 2012-13, the GOI did not release grants as per sanction during the financial year 2012-13 to 2014-15 as detailed below:

<sup>25</sup> Delay of three months in seven cases, between one and two months in six cases and less than one month in 23 cases.

**Table No. 6.6: Details of Grants approved and released by GOI as on 31.03.2015****(₹ in crore)**

<b>Year</b>	<b>Grant sanctioned by GOI</b>	<b>Amount released</b>	<b>Amount not released</b>
2012-13	10.40	7.80	2.60
2013-14	8.16	--	8.16
2014-15	5.94	0.44	5.50
<b>Total</b>	<b>24.50</b>	<b>8.24</b>	<b>16.26</b>

The Scheme was shelved by the GoI in March 2015 on the recommendations of the 14<sup>th</sup> Finance Commission. Audit observed that as of March 2015, 47<sup>26</sup> projects involving Government grant of ₹ 17.44 crore were approved by SLEC and grant of ₹ 10.99 crore<sup>27</sup> was utilised. It was seen that of the 47 projects approved by SLEC, 22 received full grants, 20 partial grants and 05 nil grants. The 22 projects which received full grants started functioning. The 20 projects which received partial grants were entitled for ₹ 5.96 crores which was not released to them. Still out of these 20, 16 projects started functioning by investing the balance funds either through bank loan or of their own. Out of these 20, four projects did not start functioning due to non-receipt of funds. Five projects did not receive any grant out of approved grant of ₹ 1.85 crore.

In addition to above 47 projects, 28 other projects were also approved by the Project Approval Committee at a total cost of ₹ 5.99 crore but the same could not be approved by SLEC and operationalised in the absence of financial support by the GOI.

Thus, delay in release of grants and furnishing of UCs by GoTN for the projects sanctioned (March 2015) resulted in non-release of GOI grant amounting to ₹ 16.26 crore due to delinking of NMFP Scheme from Centrally Sponsored Scheme. Consequently, the intended objectives of development of food processing sector and promotion initiatives for skill development were only partially achieved.

In response to audit observations, the department stated (July 2019) that proposal has been submitted to State Government for continuation of the Scheme through State funds and the same is under consideration.

**Recommendation:** The Government must, in future, ensure timely release of funds within the duration of the scheme and also furnish Utilisation Certificates in time, to avail the full benefit of a Central Scheme. This would optimise utilisation of resources of the State.

<sup>26</sup> Cold chain facilities - 5; Food Processing units - 15; Food Processing (Reefer Vehicle) - 1; Human Resources Development (Infrastructure, Food processing training centre, Seminar, EDP, etc.) - 22; and Meat Shops - 4.

<sup>27</sup> Preparatory activities: ₹ 1.37 crore and Main scheme: ₹ 9.62 crore.

## **HIGHWAYS AND MINOR PORTS DEPARTMENT**

### **6.3 Delay in settlement of dues amounting to ₹ 120.63 crore**

**Delay in submission of Completion Report for the completed Railway bridge works resulted in non-settlement of dues amounting to ₹ 120.63 crore.**

Article 1816 of the Indian Railway Code for Engineering Department envisages construction of Railway Road Over Bridges (ROBs) / Road Under Bridges (RUBs) in lieu of Level Crossings (LC) on cost sharing basis between State Government and Railways. While the construction of 'bridge proper' is carried out by Railways from their own funds, the approaches to the 'bridge proper' is built by Highways Department (HD) utilising the State funds initially. The total cost of the bridge including approaches, is to be shared equally between Railways and HD, excluding land cost which would be borne by HD.

The combined cost estimates for the bridge proper and approaches are approved by both Railways and HD. Depending on the cost estimates for their respective portions of work, reimbursement claims are preferred for settlement on quarterly basis. On completion of ROB / RUB and closure of LC, 80 *per cent* of the eligible share of expenditure is paid by the Railway authorities and the balance after finalisation of accounts and submission of Completion Report (CR) by the HD.

Para 207 of Tamil Nadu Highways Manual Volume IV stipulates that CRs should not be kept pending due to delay in settlement of compensation for land acquisition.

The issue relating to delay in receipt of reimbursement claims amounting to ₹ 25.76 crore from Railways in respect of projects executed on cost sharing basis in respect of three test checked works was highlighted in the CAG's Audit Report<sup>28</sup> of 2014. In response to Audit observation, the Highways Department had replied that action would be taken for early settlement of the claims. The position relating to follow up action, if any, initiated by the HD was reviewed during current Audit and it was seen that the situation had deteriorated in the last five years as the amount of reimbursement claims pending with the Railways increased to ₹ 224.13 crore (June 2019) as detailed below:

**Table No. 6.7: Details of claims preferred by HD**

(₹ in crore)			
Period	Expenditure incurred in excess of 50 <i>per cent</i> and claim preferred	Reimbursement received	Balance pending receipt
March 2002 to March 2010	188.45	81.14	107.32
April 2010 to March 2015	194.05	145.43	48.61
April 2015 to June 2019	234.04	165.84	68.20
<b>Total</b>	<b>616.54</b>	<b>392.41</b>	<b>224.13</b>

(Source: Details furnished by the Department)

<sup>28</sup> Para 2.1.7.2 of CAG Audit Report (Economic Sector), Government of Tamil Nadu for the year ended March 2014.

Scrutiny of records in the HD revealed that in majority of the works, expenditure on construction of approaches exceeded the expenditure of construction of bridge proper, leading to submission of claims by HD for reimbursement of the excess expenditure from Railways. Audit observed that HD had preferred (June 2019) reimbursement claims for the construction of bridge works in respect of 224 ROB/RUB undertaken during the period March 2002 to June 2019 amounting to ₹ 616.54 crore. Out of which ₹ 392.41 crore was reimbursed by Railways to HD and balance amount of ₹ 224.13 crore was still pending. The status of works in respect of claims preferred by HD is detailed below:

**Table No. 6.8: Status of works carried out during the period March 2002 to June 2019**

(₹ in crore)		
Description	No. of works	Amount to be received
Completed works	89	101.87
Ongoing works	55	81.88
Main works completed and sub-work in progress	27	36.15
Works at preliminary stage	50	4.22
Works deleted after incurring preliminary expenses	3	0.01
<b>Total</b>	<b>224</b>	<b>224.13</b>

Audit scrutiny of the case revealed that out of the 224 claims, works in respect of 89 pending claims amounting to ₹ 101.87 crore, were completed during the period from 2003 and 2018. However, CR in respect of 20 claims were sent to Railways in 2019 only. Of the remaining 69 claims, CRs for 30 completed works were pending finalisation by the field offices of HD without recorded reasons. The remaining 39 CRs were pending due to reasons like non-preparation of UCs, Court cases etc., and the claims could be settled only after finalisation of accounts and submission of CR by the HD to Railways. Delay in submission of CRs resulted in non-receipt of reimbursement claim of ₹ 101.87 crore incurred by HD for 89 bridge works leading to blocking of State funds.

In addition to these 89 completed bridges, six bridges were partially completed (September 2019). HD failed to complete sub-works viz., service lane, foot path for these bridges and hence they could not be put to use of general public. The reason for non-completion of sub-works was non-acquisition of work space by the Department prior to commencement of the works. The expenditure of State funds involved in these partially completed six bridge works was ₹ 89.17 crore. This expenditure included ₹ 18.76 crore to be reimbursed from Railways which resulted in blocking of funds.

While accepting the audit observation, HD stated (February 2020) that the reimbursement of claims from Railways is a periodical and continuous process and till date 33 Completion Reports have already been sent to Southern Railways. It further stated that sincere and effective steps were being taken to get reimbursement claim from Southern Railways.

The fact, however, remains that despite being pointed out by the Audit as far back as in 2014, HD failed to take suitable remedial measures to streamline the process of early settlement of claims. During the current Audit it was observed that the situation has further deteriorated. This is substantiated by the fact that the amount of claims pending to be settled has increased from ₹ 161.20 crore (June 2017) to ₹ 224.13 crore (June 2019). Delay in reimbursement of claim in respect of 89 completed Railway bridge works and non-completion of sub-works for the completed Railway bridge works resulted in blocking of State funds amounting to ₹ 120.63 crore<sup>29</sup>.

**Recommendation:** Highways Department may take effective steps to obtain the reimbursement of its share of expenditure from the Railways at the earliest. Completion Reports and finalisation of accounts could be expedited, so that Government funds are not unnecessarily blocked.

## **ANIMAL HUSBANDRY, DAIRYING AND FISHERIES DEPARTMENT**

### **6.4 Non-installation of equipment under National Programme for Dairy Development**

**Delay in procurement and installation of the required equipment led to non-fulfilment of the desired objective of preserving the quality of raw milk despite incurring an expenditure of ₹ 26.88 crore, besides non-receipt of GOI grant of ₹ 11.52 crore due to non-utilisation of funds.**

Government of India (GOI), launched (February 2014) the National Programme for Dairy Development for creation of infrastructure for production, procurement, processing and marketing of milk. The scheme<sup>30</sup>, including procurement of equipment, is implemented through Government of Tamil Nadu (GoTN) by the Tamil Nadu Co-operative Milk Producers Federation Ltd (Federation), District Co-operative Milk Producers' Union (DCMPU) and village level Milk Cooperative Societies (MCS)<sup>31</sup>.

At the village level Milk Cooperative Societies (MCS) collect the milk from villages and send them to nearby chilling centres/ Bulk Milk Coolers for intermediate cooling and thereafter to the dairy for further processing. The milk collected from MCS reaches the chilling centres through route vehicles which take more than three hours, thus affecting the quality<sup>32</sup> of raw milk due to bacterial growth. Therefore, in the Detailed Project Report it was proposed to install Bulk Milk Coolers (BMCs) in MCS within a radius of 10 to 15 km to preserve the milk at the required temperature. It recommended installation of

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<sup>29</sup> Includes ₹ 101.87 crore towards completed works and ₹ 18.76 crore towards incomplete works.

<sup>30</sup> Grant for establishment of Bulk Milk Cooler – 50 per cent; Grant for Automatic Milk Collection Unit and Data Processing Milk Collection unit – 100 per cent.

<sup>31</sup> GoI grant is restricted to 50 per cent for installation of Bulk Milk Coolers (BMC).

<sup>32</sup> When raw milk exposed to atmospheric variations for nearly three hours, the bacterial multiplication is very fast which in turn affects the quality. The Standard Plate Count in the milk increases and Methylene Blue Reduction Time (MBRT) gets reduced.

other equipment<sup>33</sup> also in the Societies, to reduce financial loss to the producers due to spillage/souring of milk/bacterial growth and make available quality milk to consumers, and ensure better returns to dairy farmers.

Based on the proposal (May 2017) of GoTN, GOI approved (June 2017) procurement of 210 BMCs, 504 Automated Milk Collection Units (AMCU) and 216 Data Processing and Milk Collection Units (DPMCU) at a cost of ₹ 23.24 crore<sup>34</sup> for the year 2017-18. First instalment of ₹ 11.81 crore was released (June 2017) by GOI directly to Federation with instructions to submit the Utilisation Certificate (UC) through State Government, along with other documents<sup>35</sup> for release of further funds. Similarly, for the year 2018-19, GOI approved (June 2018) ₹ 18.21 crore<sup>36</sup> for procurement of 45 BMCs, 701 AMCU, 150 DPMCU and 103 Electronic Milk Adulteration Testers with Milk Analyser (EMATs)<sup>37</sup> and released (August 2018) ₹ 7.60 crore.

Purchase orders for supply of BMCs and other equipment was issued from August 2018 onwards. The supply schedule for BMCs was five months, DPMCU and EMAT was 20 weeks and AMCU was 30 days.

Audit observed that there were delays in placement of supply orders for procurement of BMCs and other equipment on account of obtaining necessary approvals, issuing tenders/revised tenders (due to cancellation of initial tender). Audit noticed that the Federation had so far incurred (October 2020) an expenditure of ₹ 26.88 crore on procurement of 220 BMCs, 1,205 AMCU, 150 DPMCU and 103 EMAT. However, due to non-installation of BMCs and other equipment, the problems which were existing prior to launch of this scheme, i.e, spillage/souring of milk, bacterial growth, poor quality of milk and resultant loss to dairy farmers, continue to exist.

Audit scrutinised the records of eight test checked<sup>38</sup> DCMPUs and details of distance travelled, milk collection time and the Methylene Blue Reduction Test (MBRT). Joint inspection with Federation officials of a chilling centre and a milk dairy in Kancheepuram – Tiruvallur circle was also undertaken. The test results of 10,295 MBRT<sup>39</sup> conducted in 30 days in eight DCMPUs revealed that the quality of milk was 'poor' in 5,214 tests (51 *per cent*) and the remaining 5,081 tests indicated 'fair' quality. None-of the 10,295 samples tested on these days in these locations was of either good or very good quality.

<sup>33</sup> Automated Milk Collection Unit, Data Processing and Milk Collection Unit and Electronic Milk Adulteration Tester with Milk Analyser.

<sup>34</sup> GOI share - ₹ 15.74 crore and Implementing Agency (Federation) share - ₹ 7.50 crore.

<sup>35</sup> Audited certificate of balance sheet and profit and loss account, Statement of expenditure and physical progress etc.

<sup>36</sup> GOI share - ₹ 15.19 crore and Implementing Agency (Federation) share - ₹ 3.02 crore.

<sup>37</sup> An equipment to detect harmful adulterants such as urea, salt, soda, detergent, liquid soap, caustic soda and Hydrogen peroxide in raw milk.

<sup>38</sup> Dharmapuri, Dindigul, Kancheepuram, Madurai, Salem, Tiruchirappalli, Vellore and Villupuram.

<sup>39</sup> The test conducted as per IS:1479 (Part III) – 1977- Indian Standard - Methods of Test for Dairy Industry – Bacteriological Analysis of milk. It is based on decolourisation time taken by raw milk on reaction with reagents. Decolourisation time of five hours and above - Very good; Between three and four hours - Good; Between one and two hours – Fair; 30 minutes - Poor.

The Joint Inspection of MBRT test results for one day revealed that the entire quantity of 27,625 litres of milk procured from 27 societies was of ‘poor’ quality<sup>40</sup>. This ‘poor’ quality milk had been processed in the dairy and sold to consumers putting their health at risk.

**Non utilisation of funds leading to non-receipt of grant:**

The amount sanctioned/released by GoI for the project and the purchase orders and supply details of procurement of equipment are given in **Table Nos. 6.9 and 6.10** respectively.

**Table No. 6.9: Details of amount/quantity of equipment sanctioned by GoI**

(₹ in crore)

Description	Amount approved	GOI share	Amount released by GOI	Quantity of equipment			
				BMC	AMCU	DPMCU	EMAT
Sanctioned during 2017-18 (June 2017)	₹ 23.24	₹ 15.74	₹ 11.81	210	504	216	Nil
Sanctioned during 2018-19 (August 2018)	₹ 18.21	₹ 15.19	₹ 7.60	45	701	150	103
<b>Total</b>	<b>₹ 41.45</b>	<b>₹ 30.93</b>	<b>₹ 19.41</b>	<b>255</b>	<b>1,205</b>	<b>366</b>	<b>103</b>

(Source: Details furnished by Federation)

**Table No 6.10: Details of equipment procured and supplied**

Description	Quantity of equipment			
	BMC	AMCU	DPMCU	EMAT
No. of equipment approved	255	1,205	366	103
Purchase order issued (August 2018 to March 2020)	221	1,205	150	103
Received (July 2020)	220	1,205	150	103
Ordered but not yet received	01	Nil	Nil	Nil
Yet to be ordered	34	Nil	216	Nil

(Source: Details furnished by Federation)

Audit scrutiny of status relating to placement of order and their supplies revealed (till June 2020) the following:

- Despite the approval of 255 BMCs, the Federation had placed supply orders for procurement of 221 BMCs in August 2018 to March 2019. Procurement of balance 34 BMCs was under process of finalisation. Audit observed that as against the purchase order of 221, only 36 BMCs (16 per cent) were received within the stipulated delivery period (February 2019 to August 2019). 184 BMCs were received between

<sup>40</sup>

30 minutes – Poor.

September 2019 to March 2020 with a delay ranging upto seven months. The remaining 45 BMCs were received during the period from January 2020 to March 2020. The Federation had neither monitored the delayed supply nor levied any penalty on the Vendor.

- The Federation could install only 53 (24 *per cent*) and the remaining 167 BMCs remained idle for more than six months pending completion of civil works. Federation stated (July 2020) that the BMCs were not installed due to delay in completion of civil works by the Co-operative societies on account of pandemic situation.
- The supply order for procurement of 1,205 AMCUs, for which funds were released in June 2017 and August 2018, was placed by Federation in March 2020 after a delay of more than 18 months due to cancellation of initial tendering process. Federation stated (July 2020) that 1,205 AMCUs were supplied to the respective District Unions but are yet to be installed due to pandemic situation.
- The total approval for DPMCU was 366, i.e., 216 for 2017-18 and 150 for 2018-19. Tenders invited (September 2017) for 216 DPMCU for 2017-18 were not approved (January 2019) by Board Level Tender Committee (BLTC) as the rates quoted by the L1 tenderer were subsequently found on higher side at commercial negotiation stage by BLTC and were therefore retendered. The supply order for procurement of 150 DPMCU which were approved for 2018-19 was placed in September 2019 and were received. Federation stated (July 2020) that 150 DPMCU were supplied to the respective District Unions but yet to be installed due to pandemic situation.
- The supply order for procurement of 103 EMAT was placed (September 2019) after one year from release of funds. Federation stated that 103 EMAT were supplied to the respective District Unions but yet to be installed due to pandemic situation.
- The total expenditure incurred by the Federation for the procurement of 220 BMCs, 1,205 AMCUs, 150 DPMCU and 103 EMAT was ₹ 26.88 crore till October 2020.

The reply furnished by Federation is not tenable. The Federation had received 175 BMCs till December 2019 and had installed only 53 BMCs till June 2020. Remaining 167 BMCs could not be installed, due to delay in completion of civil works/readiness of the sites ranging from 6 to 17 months. The Federation failed in synchronising the completion of civil structure with the receipt of equipment. Sufficient time was available for construction work as the first purchase order was placed in August 2018 and the first lot of BMCs were received in February 2019.

Delay in utilisation of first instalment of GOI grant led to non-receipt of subsequent grants from GOI to the tune of ₹ 11.52 crore<sup>41</sup> for two years. Thus, even after incurring an expenditure of ₹ 26.88 crore, the delay in procurement/installation of the required equipment, the Scheme could not

<sup>41</sup> GOI share ₹ 30.93 crore less received ₹ 19.41 crore – balance ₹ 11.52 crore.

fulfill the desired objectives of preserving the quality of raw milk, besides non-receipt of GOI grant of ₹ 11.52 crore.

Government accepted (February 2020) the audit contention and stated that delay in tendering process, BLTC approval and manpower shortage, non-finalisation of commercial negotiation and issuing revised tender due to cancellation of initial tenders were the reasons for delay in purchase of BMCs and other equipment. It was assured that all the equipment under the project would be obtained early. It was also stated that installation of BMCs would reduce transportation time and the quality of milk would improve from fair to good.

**Recommendation:** The Department may complete the procurement and installation of the equipment early so that equipment could be utilised for preservation of the quality of milk supplied for consumption of general public as supply of poor quality milk is a public health hazard. It is further recommended that in future, the Department must plan and synchronise procurement and installation activities especially in case of schemes with GOI grant. This would enable the State Government to save its precious resources and also pass on the benefit to the intended beneficiaries.

## **PUBLIC WORKS DEPARTMENT**

### **6.5 Delay in recovery from defaulting contractors**

**Delay in recovery of additional expenditure of ₹ 1.83 crore for completion of balance building works from defaulting contractors due to ineffective pursuance and non-recovery of ₹ 0.17 crore due to non-renewal of bank guarantees.**

Clause 57.1 of General Conditions of Contract (GCC) of Tamil Nadu Building Practice (TNBP) stipulates that time is considered to be the essence of contract. If at any time, the Executive Engineer (EE), is of the opinion that the contractor is delaying the progress of the work, as per provisions of agreement, EE shall demand compliance. If the contractor neglects to comply with such demand within seven days after receipt of such notice, EE shall impose a penalty or terminate the contract.

Clause 57.4 of TNBP further stipulates that on termination of contract, Security Deposit (SD) received from the contractor shall be forfeited and EE is empowered to award any part of the work of the unexecuted portion of the contract to any other contractor, in which case all expenses incurred, in excess of already contracted amount, for completing the work shall be deducted from any money due to the original contractor by the Government under this contract or any other account whatsoever.

The Public Works Department concluded seven contracts relating to construction of building works<sup>42</sup> in five Divisions<sup>43</sup> with a provision for

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<sup>42</sup> Class rooms, Laboratories, hostel, court building and quarters.

<sup>43</sup> Coimbatore, Erode, Ramanathapuram, Tirunelveli and Villupuram.

deduction of excess expenditure from the contractor in the event of termination of contract. Details of all the seven contracts are as follows:

**Table No. 6.11: Details of seven contracts concluded**

Sl. No	Name of the contractor	Amount (₹ in lakhs)	Date of commencement / Scheduled date of completion	Date of Termination
1	M/s. A.R.M. Constructions	217.59	18.10.2010 / 17.04.2012	15.10.2013
2	M/s. Ganesh Construction	87.24	04.10.2011 / 03.08.2012	16.02.2015
3	M/s. S.R.P. Constructions	129.84	13.09.2013 / 13.09.2014	08.04.2015
4	G. Sahayadhas	79.09	31.12.2010 / 31.07.2011	24.06.2013
5	V. Ukkirapandian	47.00	04.10.2010 / 19.04.2011	27.03.2013
6	M/s. Excellent Constructions	581.11	26.02.2011 / 26.02.2012	11.09.2015
7	M/s. A.G.R. Engineering Construction	160.90	08.02.2012 / 07.02.2013	03.07.2015
	<b>Total</b>	<b>1,302.77 (₹ 13.03 crore)</b>		

The execution of seven works was not in accordance with the stipulations of the agreement and EEs of the Divisions issued notices<sup>44</sup> periodically to complete the works in time. Despite the same, the contractors failed to do so. Hence EEs of the Divisions terminated (March 2013 to September 2015) all the seven contracts, with instructions to complete the balance works at the risk and cost of the original contractors. The value of work done upto termination was ₹ 7.31 crore. The termination notices also stipulated recovery of additional expenditure for completion of balance works from original contractors through Revenue Recovery Act. Department assessed the value of balance works to be executed as ₹ 7.77 crore. Department awarded (February 2014 to September 2017) balance seven works to other contractors for ₹ 7.96 crore. These were completed (December 2015 to July 2019) at a cost of ₹ 7.17 crore. Department arrived at the additional expenditure recoverable from the original contractors of seven works as ₹ 2.31 crore (**Annexure 6**).

Audit scrutiny of records relating to recovery effected by the Department revealed the following:

- Executive Engineers issued recovery notices between June 2016 and February 2020 to seven defaulting contractors for payment of the additional expenditure of ₹ 2.31 crore with a delay ranging from three to 10 months from the completion of the work. After deducting the payments of ₹ 0.48 crore due to them, the balance amount recoverable from these seven contractors was ₹ 1.83 crore (**Annexure 7**). As the balance amount was not paid by these contractors, Departmental officials were required to invoke the provisions of Revenue Recovery Act promptly to recover the dues in co-ordination with Revenue Department. However, Audit observed that there was a delay ranging from 10 to 43 months in respect of six works for initiating the process to recover the dues in co-ordination with Revenue Department. Moreover, in respect of one work, Department could not invoke the

<sup>44</sup> Between March 2012 and August 2015.

provisions of Revenue Recovery Act even after a delay of four years from the issue of notice, due to forwarding of proposals incorrectly to District Collector, Coimbatore instead of Dindigul. Thus, recovery of ₹ 1.83 crore is pending as on March 2020.

- As against the SD of ₹ 26.40 lakh to be forfeited for seven works, SD of ₹ 9.80 lakh only was remitted to Government Accounts in respect of four works. The remaining SD of ₹ 16.60 lakh for three works could not be remitted due to non-renewal of Bank Guarantees (BGs). Audit observed that the BG for these three works expired (between June 2012 and February 2014) before the termination (between February 2015 and September 2015) of the original contract. Department failed to renew these BGs during the currency of the contract or immediately after termination of the contracts. Thus, delay in issue of recovery notices, ineffective pursuance for recovery of extra expenditure through Revenue Recovery Act and non-renewal of BGs on expiry obtained as SD led to non-realisation of Government dues of ₹ 2.00 crore<sup>45</sup> (March 2020).

Department accepted (June 2020) the audit observation and stated that necessary action had been initiated for recovery of the balance amount through Revenue Recovery Act in all the seven cases. The fact, however, remains that Departmental officials failed to initiate timely action for recovery of Government dues under Revenue Recovery Act.

**Recommendation:** Department should evolve a system to initiate recovery proceedings promptly for recovery of Government dues and to renew the Bank Guarantees, received as security, prior to their expiry. Responsibility must be fixed in cases where Bank Guarantees were not renewed due to negligence.

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<sup>45</sup> ₹ 1.83 crore represents recovery yet to be effected from seven contractors, ₹ 0.17 crore represents non recovery due to non-renewal of bank guarantee.

## 6.6 Inadequate enforcement of Government Regulations in ground water management

**Inadequate enforcement of Regulations by Public Works Department resulted in indiscriminate drawal of ground water by water based industries in Over-Exploited and Critical areas, besides non-realisation of service charges of ₹ 71.22 lakh annually.**

In view of the water scarcity, the Government of Tamil Nadu (GoTN) had re-categorised<sup>46</sup> (March 2012) blocks for ground water development in the State and restricted ground water extraction by water based companies in Over Exploited and Critical blocks<sup>47</sup>. GoTN further revised (June 2016 and October 2018) categorisation of areas on the basis of Revenue Firkas<sup>48</sup>.

As per the Regulations<sup>49</sup>, the groundwater can be extracted, only after obtaining the 'No Objection Certificate (NOC)' from Chief Engineer, State Ground and Surface Water Resources Data Centre (SG&SWRDC), Tamil Nadu, on payment of service charges of ₹ 6,000. This NOC for drawal of groundwater requires annual renewal. Further, NOC from SG&SWRDC is a prerequisite for obtaining clearances from Bureau of Indian Standards (BIS) for quality assurance of packaged water and pollution clearance from Tamil Nadu Pollution Control Board (TNPCB).

Audit observed that there was no system to ensure co-ordination between above departments to regulate extraction of groundwater from Over-Exploited and Critical Revenue Firkas. Audit also found that there was no uniformity in the validity period of authorisations issued by the three agencies, viz., NOC is issued by Chief Engineer, SG&SWRDC for a period of one year; BIS licence is issued for two years; and Consent to Operate (CTO) permission is issued by TNPCB for a period of one to 10 years.

As of October 2019, Audit scrutiny of licences granted (during the period 2016-2019) to packaged drinking water companies by BIS revealed the following:

<sup>46</sup> Over exploited, critical, semi-critical and safe blocks depending on extraction of ground water were notified as A Category – where stage of Ground water extraction is 90 *per cent* and above and all the semi-critical and Safe blocks were notified as B Category – where Stage of Ground water extraction is below 90 *per cent*.

<sup>47</sup> Where water exploitation is 90 *per cent* more than replenishment.

<sup>48</sup> A Firka is a revenue division comprising of few revenue villages. All over exploited and critical Firkas were notified as A Category Firkas; semi-critical and safe Firkas were notified as B Category Firkas.

<sup>49</sup> Regulations for management of Ground water in the State (July 2014) extend to the whole of the State of Tamil Nadu except the areas covered under Central Metropolitan Area Ground Water (Regulation) Act, 1987.

The Regulations stipulate that obtaining NOC from SG&SWRDC was a prerequisite for obtaining clearances from BIS. However, out of 1,368<sup>50</sup> packaged drinking water companies operating in Tamil Nadu, only 181 companies (13 *per cent*) had obtained NOC from Chief Engineer, SG &SWRDC. The balance 1,187 companies (87 *per cent*) were operating with BIS licence but had not obtained NOC from SG&SWRDC. The risk of not obtaining/non-renewal of NOCs would lead to over exploitation and indiscriminate use of ground water in already critical areas apart from loss of service charges of ₹ 71.22 lakh<sup>51</sup> annually.

- As per BIS records 1,368 companies were operating (October 2019) with BIS licences in drawal of ground water in Tamil Nadu. Audit observed that TNPCB issued CTO permissions to only 165 packaged drinking water companies during 2015-16 to 2017-18. Moreover, out of these 165 companies, 69 companies were operating without NOC from SG&SWRDC.
- Audit observed that more than 50 *per cent* of Revenue Firkas in 10<sup>52</sup> out of 31 districts in the State were categorised as Over-Exploited and Critical area for exploitation of ground water by GoTN. 405 packaged drinking water companies were operational in these 10 districts. Test check of records of Vellore and Villupuram districts revealed that 42 out of 134 packaged drinking water companies were operating in Over-Exploited and Critical Revenue Firkas. Only two companies out of these 42 companies (five *per cent*) possessed valid NOC; 33 companies were operating without NOC and seven companies were operating with expired NOCs.

Thus, it was seen that BIS and TNPCB granted licence/CTO to packaged drinking water companies without ascertaining the fact as to whether those companies had obtained NOCs/renewed the expired NOCs from CE, SG&SWRDC. Inadequate enforcement of Regulations by the field officials of Public Works Department resulted in indiscriminate drawal of ground water by water based industries in Over-Exploited and Critical areas. Operation of these companies without having valid NOC also resulted in loss of Service Charges to the Government to the tune of ₹ 71.22 lakh in a year.

While agreeing to above Audit observations, the Public Works Department stated (March 2020) that Draft Ground Water Act (to ensure that companies/persons involved in illegal and indiscriminate extraction of ground water are penalised) is under consideration of Government. It was also stated that notices had been issued to the companies operating illegally and action had been initiated to close them. It was also stated that steps would be taken for recovery of Service Charges from the defaulting companies.

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<sup>50</sup> As per BIS records (excluding Chennai District - the area was covered under Central Metropolitan Area Ground Water (Regulation) Act, 1987).

<sup>51</sup>  $(1,368 - 181) = 1,187 \times ₹ 6,000 = ₹ 71.22 \text{ lakh}$  (Calculated for minimum period of one year).

<sup>52</sup> Coimbatore, Dharmapuri, Dindigul, Karur, Namakkal, Salem, Thanjavur, Tiruppur, Vellore and Villupuram.

**Recommendation:** Government may put in place a single window system to regulate the issue of licences to ensure judicious drawal of water. The above instances highlighted were from the test check of records and hence, it is also recommended that there is a need to ensure and monitor strict compliance of NOCs issued in notified areas. The Government may consider imposition of a strict fine / penalty on defaulting companies / persons operating in restricted areas without valid NOC / licence.



**(VISHWANATH SINGH JADON)**  
**Accountant General (Audit-II)**  
**Tamil Nadu and Puducherry**

**Chennai**  
**The 07 Feb 2021**

**Countersigned**



**(GIRISH CHANDRA MURMU)**  
**Comptroller and Auditor General of India**

**New Delhi**  
**The 08 Feb 2021**