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The College of Agriculture, Saidapet, Madras: the First Formal Agricultural-Education Facility in India

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Similar to many other firsts in India, Madras city can boast of the first formally set up agricultural-education facility in Saidapet (then outskirts of Madras city) surrounded by the Long Tank on the one side and the Adayar River on the other. Saidapet has been a favourite locality from the 18th century for cultivation efforts of economically important plants such as *Opuntia* (the source plant to raise the scale insect *Dactylopius* for carminic-acid dye extraction) and *Saguerus rumphii*, the sago palm, better known as Anderson's *Nopalry.* This was followed by the Lushington Gardens and Lobo's Gardens in later decades. Through the persistent efforts of William Robertson and Charles Benson (graduates of the Royal Agricultural College of Cirencester, U.K.), an Experimental Farm was established first in Saidapet in 1865, which included a high-school level agriculture-teaching facility. In 1876, it grew into a full-fledged Agricultural College, servicing the needs of trained agricultural personnel for the Madras Presidency until 1890. From 1890, importance of this College began to diminish gradually, mainly, because of the *ad-hoc* policies of the Government of Madras: for example, the 300 acre block allotted to the Experimental Farm in the 1860s was down to 20 acres in 1879. This reduction hampered experimental learning, an aspect which was valued as a prime driver of this institution by its earliest teachers Robertson and Benson. Like every other institution of the British days, apathy and disregard led this institution to degenerate, although until 1906 this College survived as an institution offering the Diploma in Agriculture, after a 3-year study involving a few agricultural subjects and some non-agricultural subjects as commented on by John Augustus Voelcker, who came on an inspection visit to Saidapet Agricultural College in 1889 as part of the agricultural reform efforts of Government of India. In 1906 the college was shifted to Coimbatore by the Government of Madras, where it metamorphosed into the Agricultural College and Research Institute, which was affiliated to the University of Madras in later years. It was upgraded and renamed as the Tamil Nadu Agricultural University in 1971.

Key words: Saidapet Agricultural College (1860 - 1906), Short history

Many of us would know that the Agricultural College and Research Institute in Coimbatore [ACRIC] (11°1′ N, 76°58′ E) grew into the Tamil Nadu Agricultural University in 1971. But few would know that the College of Agriculture in Saidapet, Madras (13o02'N, 80o22'E) preceded ACRIC. Somerset Playne (1914), an English author, who travelled through southern India criss-crossing, 7000 miles (11265 km) by road in the 19th century says:

'Previous to the founding of this college at Coimbatore, agricultural education was given at a college at Saidapet, in the suburbs of Madras, where the opportunities for research and experimental work were not comparable with those now obtaining in Coimbatore.'

Formalizing agriculture in India

Richard Southwell Bourke (the Sixth Earl of Mayo), the Viceroy of India (1869–1872), pioneered in establishing a dedicated department for agriculture in India. By integrating 'forestry' from the Public Works Department, 'inland customs and salt' from the Military Department, 'land revenue and settlements' from the Foreign Department, and 'agriculture and horticulture' from the Home Department, he carved out the new Department of Agriculture, Revenue, and Commerce [DARC] in 1871 (Riddick, 2006). Allen Octavian Hume was named the first Secretary to the newly established DARC. On taking charge, Hume (1879) remarked that the oft-recurring famines in the 19th century were one key driver for the establishment of DARC, which heralded a strong and committed interest in reforming and formalizing Indian agriculture, its development and management, further to contributing to formal agricultural education. Agricultural experimental farms came up, in consequence, in various major Indian cities, such as Allahabad, Kanpur, Nagpur, Bangalore and Madras, either under instructions from or with the encouragement of DARC. Further to these experimental farms, two stud farms at Khazipur and Pusa were improved by licensing a private company to launch tobacco cultivation.

Although Hume (1879) refers to the farm in Madras as one that evolved at the initiative of DARC; in actuality, the Madras Farm, better known as the

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Saidapet Farm (also spelt as Sydapett Farm) existed from April 1865 on the initiative of the Government of Madras. Between 1865 and 1870 this farm was managed by a committee of a few amateur agriculturists appointed by the Governor of Madras. No traceable document lists the names of committee members and explains the way this farm functioned during 1865–1870.

Formalizing agriculture and agricultural education in Madras Presidency

William Denison , the Governor of Madras, sought attention of his government to continuous cropping, lack of natural manure material and their exploitation as fuel, defective agricultural implements, lack of trees, poor-quality cattle, and the lack of arable land, and agricultural and rural statistics. He imported steam ploughs, steam-driven harrows, cultivators, and seed drills, threshing machinery, and winnowers, chaff cutters and water lifts from England (Baker 1981). Based on Denison's decision a 350 ac block of land in Saidapet was handed over to the committee (referred to earlier) (Government of India 1928). Denison instructed this committee to (i) exhibit the imported tools and machinery, (ii) conduct

[1]Allan Octavian Hume, a liberal British thinker, who served Government of India as an Imperial Civil Servant, in various capacities. His role in the formation of the Indian National Congress was immense. He was an avid natural historian with particular interest in the avifauna of India (Wedderburn 1913). As a forthright person Hume spoke openly. His forthrightness earned his sacking from his coveted position by Viceroy Robert Bulwer-Lytton. Indian newspapers said that Hume was victimized, since he was out of step with the policies of the Government, often intruding into aspects of administration with critical opinions (Moulton 1985).

trials on using artificial manures (= synthetic chemical fertilizers), (iii) display results of trials made on 'improved' agriculture to local people. The committee followed Denison's instructions for the next seven years, which did not yield any worthwhile results. This resulted in moving farm administration to the Government, viz., the Board of Revenue [BoR]. Krishnaswami (1946) summarizes the phases of growth and fall of the Saidapet Farm (and the College) as follows:

'… the history of Government efforts to improve agriculture in Madras from 1863 to the close of the century falls into three periods. The first witnessed the ascendency of the idea of a model farm worked on western methods, the second was dominated by a barren discussion on agricultural education, and in the third agricultural effort was blighted by the insistence on the importance of statistics. … The old students of the Saidapet college played no inconsiderable part in the development of the Department in its later stages.'

Saidapet: A landscape of rich economic-botanical heritage

The 1730s map of Madras 'city' includes only two residential suburbs occupied by Indians, viz., Muthial Pettah and Pedda Naicken Pettah. Saidapet, separated by 7.5 miles [11.8 km] from the central business district of Madras, and considered 'rural, essentially was agricultural area, with no specific name. This area grew into a residential locality only in the later decades of the 1730s. Earlier, this area was known as Marmelon (corrupted as Mambalam today). The bridge constructed across the Adayar river in Marmelon by the Armenian merchant Coja Petrus Woskan in 1728 (Seth, 1897) exists as a rebuilt structure, the Maraimalai-Adigal Bridge. When James Anderson established the Nopalry this area is referred as Marmelon only. In the mid-decades of the 19th century, this area could have been a preferred location to grow economically useful plants such as mulberry (Morus alba, Moraceae) and plant-dependent bioresources, such as the silkworm (Bombyx mori, Lepidoptera: Bombycidae) for the British (Raman, 2011). Availability of water from the Long Tank on one side and Adayar river on the other (Fig. 1) could have been the reasons. The alluvial soil of Saidapet (Benson, 1879) could have been another reason.

Obscure Internet sites point out that the name Saidapet evolved from either Sayyid-pettah or Sayyid-Shah-pettah. Such an explanation does not occur in Henry Love's Vestiges of Old Madras (1913). Therefore we checked with the contemporary Madras-city historian S. Anwar, who rejected this explanation. He explained the etymology of Saidapet as follows:

'The old name was actually Sayeedabad (or Saidabad), which should be read as Sayeed Abad. Abad is a Persian word for a town and is usually added as a suffix to the founder's name (e.g., Wallajah-Abad, Kanchipuram, Tamil Nadu). I believe that it was named after Nawab Sadathullah Khan, who should have built it between 1720 and 1732. Sadathullah Khan's original name was Mohammed Sayeed. This residential locality, viz., Sayyedabad (corrupted as Saidapet) was built by him. He was the founder of the Nawayat Dynasty of the Arcot Nawabs, which preceded the Wallajahs.'

James Anderson (1739-1809), Physician General of Madras, was passionate about growing economically important plants and insects in the 18th century Madras. To extract carminic-acid dye from different species of Dactylopius (Hemiptera: Coccoidea) useful in dyeing the otherwise bland cotton fabric, he brought different species of Opuntia (Cactaceae) from the Central and South Americas into Madras, which were the preferred host plants of Dactylopius. The imported plants were grown in Marmelon (later Saidapet) in an organized manner, which came to be known as the Marmelon Nopalry (nopal = *Opuntia*, Spanish) in 1789. The Nopalry housed several other economically relevant plants, such as the sago palm (*Saguerus rumphii,* Arecaceae) in addition to *Opuntia*. The Nopalry was managed by Anderson's nephew Andrew Berry, who too was a qualified surgeon and belonged to Madras Medical Service (Raman, 2011). Charles May Lushington, who entered Madras Civil Service in 1801 and became a Member of the Council of Directors at Fort St. George in 1838, established what came to be referred as the Lushington Gardens in Saidapet. Rangacharya (1939) indicates that the Lushington Gardens existed opposite to the Veterinary College at

Saidapet. The landscape of the Lushington Gardens partly included the by-then-dilapidated Nopalry of Anderson (Love, 1913). A 1822 map of Madras shows Lushington Gardens as Moonia Pillay's Garden (read, Munia Pillai's Garden) and that of 1837 shows the same as General Campbell's Botanic Gardens. No traceable document explains the floristic composition of Lushington Gardens. Reverend Michael Francis Lobo, a Roman-Catholic priest, who, for some time, officiated as the Bishop of Mylapore (San Thomé) maintained a garden in Saidapet. An evidence of the floral richness of Lobo's garden is the portrait featuring the fruit-yielding and timber tree Dispyros kaki (persimmon, Ebenaceae) (Noltie, 2016). These botanical efforts, mostly to grow plants of economic relevance, foreshadow, although indirectly the establishment of the Experimental Farm in 1865 and the College of Agriculture in 1876 in Saidapet.

College of Agriculture, Saidapet

Further to being an Experimental Farm, this facility formally started in 1865, was additionally used for training potential agricultural personnel, which from 1876, came to be referred as the College of Agriculture. The college occurred within the farm precinct. Benson's monograph, the Saidapet Experimental Farm: Manual and Guide (1879), includes an outline map of the Farm (frontispiece), which shows the college site towards the western edge of the farm precinct, opening onto the Mount Road (Fig. 2). Opposite to what is marked as the 'Agricultural college site and grounds' is the Saidapet High School, which is difficult to determine. Very probably this refers to the agricultural school, which functioned in the farm precinct almost from the beginning days of the Experimental Farm. The Long Tank along the northern edge of the farm precinct is indicated as the 'Mylapore Tank'. The Adayar river is shown flowing almost circling the farm along the southern and eastern edges.

The story of the Agricultural College of Saidapet is intimately intertwined with that of the Experimental Farm, since the farm serviced the college in terms of teaching and practical work of the learners. Except for the remarks available in Krishnaswami (1949), no traceable details of the farm between 1865 - 1870 exist. W. R. Robertson (Portrait 1), C. Benson (Portrait 2), and W. Keess (Portrait 3) figure prominently in the context of management of the farm, farm–college complex, and the college, respectively. From 1885 the farm ceased to exist as an independent entity, thus the name Experimental Farm extinguished. The original 300 acre block of land allotted to the Experimental Farm in the 1860s by the Government was reduced to 20 ac (Benson, 1879) so as to meet the minimal practical training needs of learners at the college.

Early days

William Rowntrie Robertson came to Madras in the mid 1860s after training in agriculture at the Royal Agricultural College of Cirencester, U.K. The Government of Madras appointed him as the Superintendent of the Saidapet Experimental Farm in 1868. With the start of the College in 1876, he also officiated as the Principal of the College. Between 1868 and 1871 the Experimental Farm also serviced as a kind of a high school where minimal training to aspiring learners (termed as 'apprentices') in agriculture was offered. Each learner six persons in 1868 received a Madras Government stipend of Rs. 15/- p. m., which increased to Rs. 25/- p.m. in the fourth year of apprenticeship. During 1860–71, Robertson introduced

Rangacharya refers to the Agricultural College in Saidapet as the Veterinary College. The Saidapet Agricultural College did include veterinary-science teaching. The British were enthusiastic to build a separate college of Veterinary Sciences in Madras, but it did not materialize until 1903. Rangacharya's reference to the Agricultural College as the Veterinary College is an error. Mount Road the arterial road that links Fort St. George and St Thomas's Mount (c. 20 km); named so because of the western terminal, St Thomas Mount.

Swedish ploughs, American sorghums, and English bulls into Saidapet campus. He pioneered in developing what later came to be known as the 'Saidapet breed of sheep' . He published Agriculture for Schools of South India in 1880, further to Reports on the Agricultural Conditions, Capabilities, and Prospects of the Neilgherry and Coimbatore Districts in 1881. The road connecting Thadagam and Lawley Roads in Coimbatore celebrates William Robertson. Charles Benson joined as Robertson's deputy in 1874. He too had his early academic training from the Royal Agricultural College of Cirencester. He wrote The Saidapet Experimental Farm Manual and Guide in 1879, Report on a Tour in the Cuddapah and North Arcot Districts in 1879, and the Agricultural Account of Kurnool District in 1889. He officiated as the Principal of the College in 1878–80. With the abolishing of the Farm in 1885, Benson was appointed as the Assistant Commissioner of Agriculture and later promoted as the Deputy Director of Land Records and Agriculture, Madras. During remainder of the time college survived in Saidapet until 1906, Walter Keess officiated as the Principal.

The question of offering a formal, agricultural-education programme was discussed by the Government of Madras in 1872–73, but the decision was that the time was not ripe for a comprehensive scheme for agricultural education in the Presidency. This discussion provoked the BoR to rethink and reconsider that the Experimental Farm should be useful to the public and function as a model farm. Similar to the Farm in Saidapet, district farms were the need of the day and manned by trained personnel, who could be employed as the District Farm Superintendents. This recognition of the gap of trained personnel emphasized the need that unless a systematic instruction in agriculture and allied sciences was imparted at Saidapet Farm, competent superintendents for the proposed district farms would not be available. The BoR also considered that such a measure would empower not only the superintendents of Government farms of Madras, but also gradually

enable the agricultural industry and its better management in the whole of India (Satthianadhan, 1894). The way the Saidapet Experimental Farm functioned between 1865 and 1871, training apprentices, more as an agricultural school, was to be modified suiting the need of filling the anticipated positions of District Farm Superintendents in 1872. This decision by BoR changed the complexion of the Saidapet Experimental Farm, then functioning more as a high-school, developing into a higher-grade institution, viz., Agricultural College in Saidapet. Trainees were selected particularly from Coimbatore, Bellary, and Tinnevelly districts, where district farms were to be set up (DARC Proceedings, 1873).

Based on such an understanding, the BoR sought a proposal from Robertson towards establishing an agricultural college. Robertson submitted a detailed proposal, in which he argued that a sound theoretical background of agriculture was but essential for better equipped farm superintendents, rather than those with a mere observational learning experience. He added that education pertaining to forestry and veterinary science is equally relevant to bestow the country (sic. India) with greater benefits. His proposal for a college was influenced by the then prevalent dedicated medical and engineering colleges in Madras and elsewhere. He also suggested introduction of agriculture as a subject in rural high schools, which could facilitate feeding aspiring learners into to the proposed Agricultural College. Furthermore, he suggested that the academic staff should include an agricultural chemist, a botanist, and a veterinary surgeon, who were necessary to build a spirit of inquiry further to teaching. BoR on reviewing Robertson's proposal indicated that it was impressed, but saw the proposal as 'ambitious' and 'beyond the present requirements'. The BoR, hence, decided to institute 'preparatory classes' and the contents were to be taught by Robertson and Benson to a limited number of stipendiary and free students. At that stage no reading room or a museum or a library was considered essential. In essence, up to 1875, this academic enterprise functioned similar to a High School, but with a clear focus on training in the science of agriculture

For detailed notes on 'Saidapet breed of sheep' please read the report of the Superintendent of Government Farms (1876), pages 167–168.

Robertson submitted another detailed project with a newly worked out costing towards a revitalized institution in July 1875, which was received by BoR and the then Acting Director of Public Instruction, E. B. Powell . This 1875 proposal (referred as prospectus) was accepted by the Government with some emendations in March 1876. A section of the prospectus extracted from Satthianadhan (1894) is shown as Fig. 3 for readers to grasp an idea of the kind of course structure and design was contemplated by Robertson.

The report of the Superintendent of Government Farms (1876) includes the following, which clarifies the start of the College in 1876 :

'We are glad to find that the agricultural apprentices have done as well as they could be expected to do under existing arrangements. We are credibly informed that this class is shortly broken up, Government having sanctioned the establishment of an Agricultural College, in which both theoretical and practical instruction on agriculture and kindred subjects will be given. The Lecturers have not yet been appointed, but we believe that, as far as at present known, the following list is substantially correct.

Subjects	Lecturers
Veterinary Surgery	G. Western, Esq., M.E.C., V.S.
Geology	Surgeon-Major King.
Agriculture	W. R. Robertson, Esq., M.R.A.C.

C. Benson, Esq., M.R.A.C., will probably have charge of the Sydapet Experimental Farm, and Kasper Schiffmayer, Esq., of the Field and laboratory experiments. Besides these lecturers, masters will be appointed to instruct pupils in Drawing, Languages and to assist the students generally in getting a good rudimentary knowledge of the subjects of the lectures delivered in the institution. We hope that many respectable youths, both East Indian (Anglo-Indian) and Native, will now come forward and offer themselves as candidates for agricultural honors. Why should not our lads be as proud to belong to our Madras School of Agriculture as the Graduates of the Royal Agricultural College at Cirencester are of their Alma Mater?'

The College started functioning and servicing the people of Madras Presidency in 1876. It was rated as a 'complete' and 'high-class' public, agricultural college (Vijayaraghavan, 1994). Robertson led the college for some more years. Charles Benson, reporting to Robertson, superintended the Farm, which met and serviced teaching requirements of the college from 1876. Therefore, hereafter, we will refer to this facility as Farm–College complex. With the start of the College, the role of the farm turned two-fold: educational and experimental.

The Farm–College complex in 1879 included a granary, storehouses for cattle feed, a chaffing and cotton-ginning room, sheep sheds, cattle sheds, a poultry house, and other necessary accommodations. These buildings were built of brick-and-mud walls, except the open sheds, which included the brick-and-lime pillars for support. Most of the buildings were tile-roofed. Teaching here involved considerable volume of practical (experimental) work aiming at improved agricultural practice, which was considered the best method of skilling agricultural scientists not only for recruitment in the Madras Presidency, but also for the whole of India.

The following were some of the determined learning tasks (Benson, 1879):

Eyre Burton Powell, the first Principal of Madras Presidency College, rose in ranks from being a clerk at the Madras Presidency School, which later transformed as the College.

Surgeon-Major King listed is Walter Gawen King of the Indian Medical Service, who pioneered in vaccines and production of

vaccination in Madras. The King Institute of Preventive Medicine (Guindy) celebrates his contributions to preventive medicine (Raman and Raman, 2015). He was also the Professor Physics at the Madras Presidency College for some time. We could not determine the details of G. Western, who must have been a trained veterinary surgeon, as indicated by the letters 'V. S.' after his name. Details of Hamilton and Wilkins, regrettably, were not traceable. M.R.A.C. — Member of the Royal Agricultural College (U.K.).

- Experimental learning of the relevance and use of crop rotation.
- Introduction to root and green crops of India, and learning to minimizing irrigation by human efforts.
- Introducing new crops.
- Learning to provide new seeds and fresh seeds for the crops cultivated.
- Experimental learning to know of prudent use of water in agriculture, about 'dry' crops, about growing edible grasses and other fodder plants for livestock.
- Practical learning to use lime and both inorganic and organic manures.
- Learning about new and improved implements useful in rural farming.
- Learning to improve the quality of working cattle, sheep, horse, and other varieties (sic. breeds?) of Indian livestock.

The Experimental Farm as of 1879 (date of Benson monograph) included 25 determined fields (= experimental field sites), each of which was numbered for easy administration and management. The quality of science taught via experimental learning, as we know from Benson (1879) impresses. For example, the Table in p. 7 of the manual refers to the chemical measurements of alumina, iron oxide, lime phosphate, lime carbonate, magnesium carbonate, lime sulphate, chlorides, moisture, organic matter, sand, testing top - and sub soils. A detailed Table in p. 8 refers to management of soils in terms of irrigation and measurement of soil quality (on a scale of 1–6, where 1, the best and 6, the least). Curiously, the word taram (Tamizh) is used in the Table in p. 8, meaning 'quality'. This table also includes the costing involved in the improvement made to different soils in the Experimental Farm. The remainder of pages in Benson (1879) include other pertinent information, mostly referring to the experimental trials made, in high likelihood, as part of practical training offered to learners. Some examples are the use of alluvial earth as manure, cultivation of Burmese rice, cultivation of various cotton varieties including those imported from North America and West Indies, early harvesting of crops, trials on elephant grass (Pennisetum purpureum, Poaceae) as fodder material, running and managing grain-crushing machines, designs of hygienic cattle sheds, manufacture of mutton, test of saltpetre as manure, cost of lifting water and design of cost-effective winnowing machines. The fascinating aspect of this detailed monograph of Benson is that it vividly portrays every microdetail, which was followed in the Experimental Farm and how concurrently those experiments were adapted for teaching in equipping learners with better professional and management skills.

Sunset days

Benson (1879) also supplies a few disconnected details of the Farm in 1878–79: (i) the farm included a land area of 20 ac, (ii) this land area was not amenable to irrigation by gravitation, (iii) wells (number not known) supplied water, and (iv) each of those wells included a water column of 20' (c. 6 m) during most times of the year.

On a request from the Government of India made in 1889, the Secretary of State for India in London directed John Augustus Voelcker (1886–1936), an agricultural chemist of the Royal Agricultural Society, to travel throughout India and propose a course of action to improve Indian agriculture. Voelcker toured India in two phases: i) 10th December 1889 to 19 th May, 1890 and ii) 14th July, 1890 to 12th September, 1890. The exact date of Voelcker's visit to the Experimental Farm and Agricultural College in Saidapet is not clear. From available notes in Voelcker's Report on the Improvement of Indian Agriculture (1893), we infer that he should have visited Saidapet during Phase 2 of his India tour. At the conclusion of his tour, he presented his findings at an agricultural conference presided over by Edward Buck in Simla held on 6th to 13th October 1890. In the context of Agricultural College in Saidapet, the bulk of Voelcker's (1893) remarks refers to the farm

John Voelcker's father too was a well-known agricultural chemist with the same surname, John Augustus [Christopher] Völcker ([read as Fölcker]. The senior Völcker started writing his name as 'Voelcker' after his migration to U.K. from Germany on employment.

Edward Charles Buck was the Secretary, Department of Agriculture, Revenue, and Commerce in 1882.

the energy engine of the college — in a sunset tone. He uses the term 'abandonment of the Farm' quoting words of the then Director of Madras Agricultural Department:

'The results attained at the Farm are so far as the agriculture of the country is concerned, purely negative; no attempt is made to connect the one with the other.'

Voelcker argues that frequent changes in the Government of Madras's policy were the primary reason for the awkward status of Experimental Farm and Agricultural College in Saidapet in 1890. He remarks, what was started as a 300 acre farm had shrunk miserably, and that reduction had strikingly contributed to the poor performance of the Farm and the College:

'… too small for stock breeding and too barren for crop growing'.

He continues that the cleaving of day-today administration of the Farm and the College was another strong contributor to poor performance. The

reduction in size, Voelcker speaks, without mincing words — had led to the situation that no student uses the Farm in any experimental, experiential learning in different agricultural disciplines, contrary to what was occurring in the 1870s during the early days of Robertson and Benson. Speaking further on the Farm, Voelcker nevertheless pays rich tributes to the quality of maintenance of cattle there and on the 'box' system of securing cattle with litter under them. He concludes as follows:

'No Experimental Farm has worked harder than Saidapet in trying to introduce iron ploughs, and here and there (…) some few iron ploughs are used by landed proprietors; but they hardly come down to the small cultivators yet, though much ingenuity has been expended on simplifying them and on decreasing their cost.'

At the time of Voelcker's visit at Saidapet, the Government of Madras was contemplating extension of the Farm–College complex and expanding its role in teaching agriculture formally. Volecker (1893) indicates that what had started as an Agricultural College had metamorphosed more into a General-Science College, where agriculture was taught as one of the several other subjects, which he argues was an element of distraction and dilution and pointer towards negative growth.

The General-Science College (***sensu*** Voelcker, 1893) probably refers to the Teachers' College, which had then moved to the Saidapet Agricultural Farm—College precinct in 1889. Voelcker says:

The agricultural course contains far too many subjects, and, to all appearance, far too great attainment in these is expected. Mathematics (including trigonometry and logarithms), mensuration, statics, building materials and construction, physiography, forestry, and other subjects find a place along with agriculture, agricultural chemistry, and veterinary science. ...The main point to determine with regard to Saidapet College is, I think, what its future to be. Is it to be an Agricultural College? If so, the course ought to be more purely agricultural one, with superfluous subjects struck out, and practical work substituted for them. If, however, it is to be a general Science College, then this be clearly understood, and let agriculture merely take its place as one of the subjects taught.

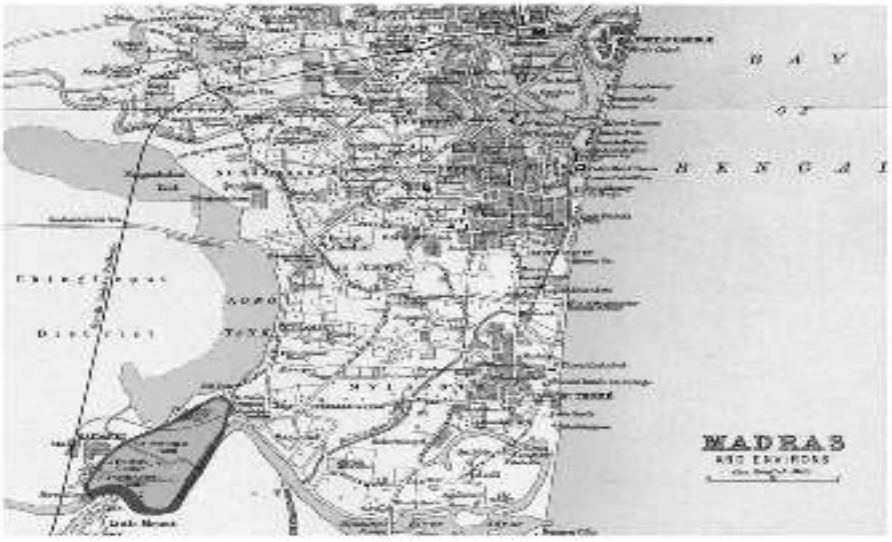


Fig. 1. J. G. Bartholomew's Madras and Its Environs, 1909. Saidapet (arrow) showing the Teachers College and Agricultural College (shown as 'Agricultural School') abutted by the sprawling Long Tank, extending from Nungambakkam from north-west towards Saidapet and the Adyar River a little further south. Fort St. George is evident at the north-eastern corner of the map.

Enlarged view of Saidapet Farm. Coordinates: 13.0235°N 80.2237°E

The Teachers' College (also known as the Teachers' Training College, and today, the Institute of Advanced Study in Education), another oldest academic institution of its kind in India, was shifted to the Saidapet Farm–Agricultural College precinct in 1887. Until the Teacher's College acquired its own new building in the same precinct in 1889, it was housed in the first floor of the Agricultural College (University of Madras, 1957). The Government

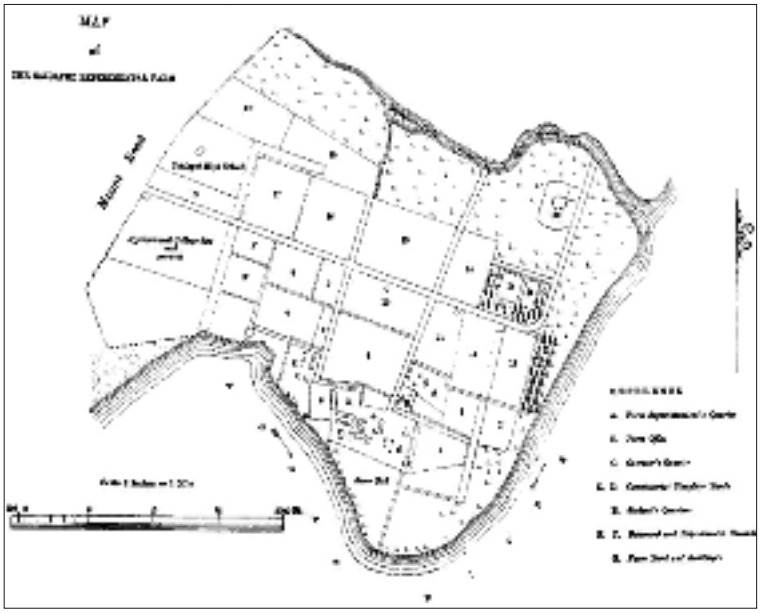
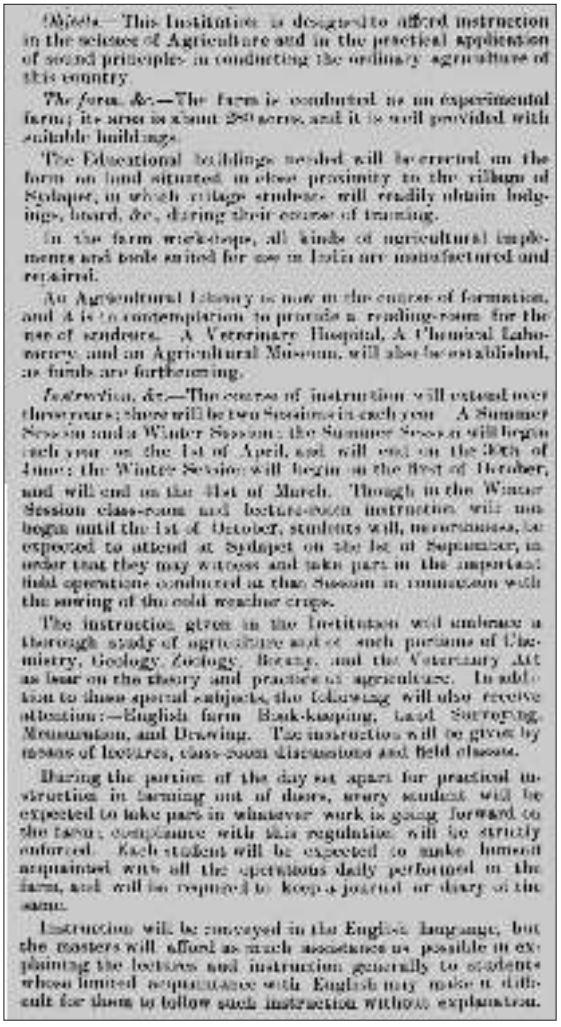


Fig. 2. Map of the Saidapet Experimental Farm
(Source: Charles Benson, 1879)

Normal School, established in Vepery in 1856, was shifted to the Agricultural Farm–College precinct for want of additional space (University of Madras, 1957).



Object.—This Institution is designed to afford instruction in the science of Agriculture and in the practical application of sound principles in conducting the ordinary agriculture of this country.

The farm, &c.—The farm is conducted as an experimental farm; its area is about 250 acres, and it is well provided with suitable buildings.

The Educational buildings needed will be erected on the farm on land situated in close proximity to the village of Sydapet, in which village students will readily obtain lodgings, board, &c., during their course of training.

In the farm workshops, all kinds of agricultural implements and tools suited for use in India are manufactured and repaired.

An Agricultural Library is now in the course of formation, and it is in contemplation to provide a reading-room for the use of students. A Veterinary Hospital, A Chemical Laboratory, and an Agricultural Museum, will also be established, as funds are forthcoming.

Instruction, &c.—The course of instruction will extend over three years; there will be two Sessions in each year. A Summer Session and a Winter Session: the Summer Session will begin each year on the 1st of April, and will end on the 30th of June; the Winter Session will begin on the first of October, and will end on the 31st of March. Though in the Winter Session class-room and lecture-room instruction will not begin until the 1st of October, students will, nevertheless, be expected to attend at Sydapet on the 1st of September, in order that they may witness and take part in the important field operations conducted in that Session in connexion with the sowing of the cold weather crops.

The instruction given in the Institution will embrace a thorough study of agriculture and of such portions of Chemistry, Geology, Zoology, Botany, and the Veterinary Art as bear on the theory and practice of agriculture. In addition to these special subjects, the following will also receive attention:—English farm Book-keeping, Land Surveying, Mensuration, and Drawing. The instruction will be given by means of lectures, class-room discussions and field classes.

During the portion of the day set apart for practical instruction in farming out of doors, every student will be expected to take part in whatever work is going forward on the farm; compliance with this regulation will be strictly enforced. Each student will be expected to make himself acquainted with all the operations daily performed in the farm, and will be required to keep a journal or diary of the same.

Instruction will be conveyed in the English language, but the masters will afford as much assistance as possible in explaining the lectures and instruction generally to students whose limited acquaintance with English may make it difficult for them to follow such instruction without explanation.

The upgraded school, renamed as the Teacher's College became operational in 1887 in Saidapet. At this time, the Government sanctioned two additional teachers for Teachers' College of whom, one was to teach bookkeeping, commercial correspondence, and

Elegantly ornate *Diploma in Agriculture* (30 x24"; 75 x 60 cm), which could have been held with pride by the graduates, issued by the Commissioner of Government of Examinations (Government of Madras, Technical Examinations) in 1901. (Courtesy: RamineniBhaskarendra Rao, Madanapalli).

political economy and the other was to teach surveying, levelling, mensuration, and geometrical drawing for pupils enrolled in the Licentiate in Teaching (L.T.) programme, which had commenced there with approval from the University of Madras (Satthianadhan, 1894).

Portrait 1. William Robertson, Portrait 2. Charles Benson, Portrait 3. Walter Keess.

When we align Voelcker's comment (1893) and Satthianadhan's narrative on the appointment of new teachers to teach surveying, levelling, mensuration, and geometrical drawing, the emerging picture gets clearer. These changes could have been made as an effort to maximize efficiency as perceived by the administrators and the academic personnel involved. This explanation is reinforced in the following remark of Chandranna (2003):

'Arrangements were also made for training teachers of the Madras Normal School (sic. Teachers' College) to attend lectures on agriculture.'

The academic changes made at this period could have been the key factors, which, according to Voelcker, are the factors contributed to the decline of agricultural education in Saidapet. Nevertheless, what we, today, need to factor here is that the Saidapet Agricultural College persisted for the next 17 years and was shifted to Coimbatore in 1906. A notation in the bulletin of the U. S. Department of Agriculture (1900) indicates Walter Keess - an alumnus of the University of Cambridge (B.A.–1882, M.A.–1886), 'directed' Agricultural College in 1899. In these sunset years, the Agricultural College offered the Diploma in Agriculture (Fig. 4) issued by the Department of Technical Examinations of the Government of Madras signed by the Commissioner for Government Examinations, after a 3-year study of subjects such as Agriculture, Inorganic Chemistry, Organic Chemistry, Veterinary Science, Botany, Agricultural Engineering, Surveying and Levelling, and Physiography.

Shifting the College to Coimbatore

A new agricultural development policy laid down by George Nathaniel Curzon (Governor-General of India, 1899—1905) ushered in several changes in agricultural management and education in India (Lipsett, 1903). One major event following this policy initiative of Curzon was the establishment of the Imperial Agricultural Research Institute at Pusa in 1905. This institute shifted to New Delhi as the Indian Agricultural Research Institute in later years. This was shortly followed by the establishment of the ACRIC, with the foundation laid in 1906 (Wood, 1918) and the ACRIC commenced functioning in full swing in June 1908. In essence, the Agricultural College at Saidapet was shifted to Coimbatore for the reason of larger land area (500 ac), emphasizing on formal agricultural teaching and learning in addition to promoting active agricultural research. The first batch of students was admitted in 1908 towards a Certificate programme (2 years duration) and an advanced Diploma programme (18 months duration). The Certificate and Diploma programmes ceased in 1925. The ACRIC was affiliated to the University of Madras in 1920 and the Bachelor of Science (Agriculture) programme started with the first batch of students being turned out in 1923. J. W. Shepperson was the founding principal of ACRI, Coimbatore from 1906 to 1909 (Ramasamy n.d.).

Conclusion

This effort chronicles the story of the early efforts to establish formal agricultural education and training in India, filling gaps that exist among the known fragments. Several colleges and universities committed to teaching and research in agriculture have come up in later years, valuing the importance of agricultural education and training, given that India is an agrarian country. The Saidapet Agricultural School and late College story is studded with eclectic experiences of successes and failures in various dimensions. The two key players in this story were William Robertson and Charles Benson, who played their roles effectively in creating the Experimental Farm, which gradually evolved as a teaching facility of a high-school calibre, and then into one of a college calibre. The most impressive element is the way both Robertson and Benson strived to incorporate practical learning as deemed appropriate for Madras specifically and India generally, and how Benson has narrated their trailblazing efforts. Between 1885 and 1906, the College struggled to persist, yet it trained aspiring youth into becoming agricultural officers and managers by offering 3-year training leading to Diploma in Agriculture. The contents of the course material seem to have been strongly compromised with the entry of the Teachers' College into Saidapet Farm–College precinct, which we – the authors of this article – interpret as an element to maximize efficiency, although Voelcker (1893) criticizes as

counterproductive. Nonetheless, the college served its role fully and gracefully, before being reincarnated as the ACRIC under Shepperson. Why the Saidapet Experimental Farm and Agricultural School attracted the attention of Florence Nightingale, when she comments on the purpose of agriculture and its development and the need for trained personnel in agricultural practice and management in India (Vallée, 2007), therefore, leaves us not surprised.

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