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# TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

*Revenue* DEPARTMENT

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Extract from the Proceedings of Government in the Educational Department dated 12<sup>th</sup>  
December 1878.

# COMMENCEMENT OF AGRICULTURAL EDUCATION IN THE BOMBAY PRESIDENCY.

Minute by the Governor of Bombay, dated 29th October 1878.

1. The need of agricultural science in this country, the backwardness of the people in the superior methods of culture, the slow deterioration of the soil in many places from exhaustive processes, the want of restorative means and appliances, the probability that by improved husbandry the yield of the soil could be augmented,—are considerations so manifestly important that no apology is needed, when I ask my Honourable Colleagues to join me in pressing them upon the attention of all concerned. Nor need I at all dilate upon them, as they are so well known to, and so fully appreciated by, my Honourable Colleagues.

2. Referring to paragraph 5 of Minute of the 8th September, regarding the formation of a class at Poona for training natives in scientific agriculture,—in which my Honourable Colleagues concurred,—I have now to mention that Mr. W. R. Robertson (Superintendent of the Agricultural Institute at Sydāpet near Madras) has arrived at Poona and conferred with me and with Dr. Cooke, Principal of the Civil Engineering College at Poona—on the whole subject of education in scientific agriculture. I have accordingly to state for the consideration of my Honourable Colleagues the conclusions to which we have come provisionally.

3. Despite the superior local advantages, respecting the productiveness of agriculture and the enterprising character of the people, which Guzerat possesses as compared with the Deccan, I find that Poona is clearly the best place for the establishment of an Agricultural College. I bear in mind that the people of Ahmedabad are anxious that such a College should be established at that city. We do not, however, at present possess the means in Guzerat, whereas we do possess them in Poona. Hereafter if the development of agricultural education shall enable us to establish a College in Guzerat, that will be well: meanwhile we must be content with making a commencement at Poona where the necessary facilities exist. At Poona alone have we at hand the scientific appliances and the teaching power for high education in agriculture. As already proposed in my Minute of the 8th September, the Civil Engineering College at Poona (which is fast developing into a College of Science) can make scientific agriculture one of its branches. The Committee, which my Honourable Colleagues concurred with me in appointing, have submitted their proposals, which will be found worthy of our approval, whereby only matriculated students will be admitted to the agricultural class. This class, then, will be strictly a College class, and its under-graduates will be qualifying themselves for the degrees which, we hope, the Bombay University will confer in scientific agriculture. In that case the University would fix the standard of examination. At this College will be preserved the high standard of agricultural education which students from the interior of the country may be expected to reach. Here will be placed the centre and the head of the system. From here will emanate the supervision which will be needed for whatever agricultural schools may be established in the various districts. The annual cost of the arrangement is estimated by the Committee at Rs. 6,000.

4. I may add that at Poona veterinary instruction of the best kind can be afforded—indeed an excellent school of this kind already exists in the institution.

5. In connection with the College at Poona, I propose (if my Honourable Colleagues shall concur) to establish agricultural classes in some of the high schools in the several districts of the Presidency. This method will be comparatively cheap and easy: can be almost immediately carried out, and can be adapted to a very small number of students at the outset; whereas the setting up of separate agricultural schools would be costly and difficult, would be beyond our means at present, and would be unsuitable if at the outset only a few students were to come forward. At a high school the students are taught English and the vernacular, also the ordinary kinds of elementary knowledge. Those among them who might be willing to attend an agricultural class could do so. Mr. Robertson thinks that one hour a day for in-door agricultural instruction and one hour extra out of doors every other day would suffice. To that extent the students would have to be excused some of the ordinary subjects of study, the English and vernacular studies only being obligatory. After a two years course they might, in the opinion of Mr. Robertson and Dr. Cooke, receive "school certificates" of proficiency in agriculture on passing a moderate examination, which would be conducted by the Poona College. Such a certificate would *per se* be of use to a young man even if he went no further, but more particularly it would admit him to the agricultural class of the Poona College.

6. It will be remembered that to this class matriculated students will also be admitted and will be eligible for a University degree in agriculture. A certificated student of an agricultural school, as above described, will be admitted to the College class, indeed, but will not be eligible for a degree unless he passes the Matriculation Examination also. If he does not become eligible for a degree, he may, after a two years course in the College, obtain a College certificate, which will have some considerable value, but will never be so valuable as a degree. It would be better, of course, that after having obtained his school certificate in agriculture, he should also pass the Matriculation Examination. But he may not be able to do so, and in that case he should not be debarred from the College instruction even though he may not be eligible for a degree.

7. The course for a degree will probably be determined by the University at three years. But Mr. Robertson and Dr. Cooke think that for a College certificate, as above described, a two years course will suffice, as the students must necessarily have undergone a two years agricultural course at the school.

8. The College then would have two sets of students—first, under-graduates going through a three years course for a degree; second, students having school certificates and going through a two years course for a College certificate. Young men belonging to either set will be most useful persons to the country in various capacities, official and non-official.

9. Dr. Cooke desires to open this class from the commencement of next session, that is, in November. No time, therefore, should be lost in sending round the requisite notices to the several high schools to inform intending students. The curriculum has been already proposed by the Committee above alluded to. The chemical course would be partly devoted to agricultural chemistry; the botanical course to agricultural botany; the geologic course to surface geology. For the agricultural course Dr. Cooke agrees with me in thinking that we may await the appearance of Mr. Robertson's text-book of agriculture to be issued very soon, which is based on the best English text-books, with special reference to the experience gained during several years in Southern India.

10. I revert to the organization of the agricultural classes in the high schools. It would be very desirable to open at least six such classes at various places; three of which classes might be in Guzerat, where the system is more likely to be immediately popular than any where else; one in Khandesh and the remainder in the Deccan. We know that many students in Guzerat are willing to come forward.

11. The first question is, whence are the teachers to be obtained? Now, fortunately, for some time past many youths from the Bombay Presidency—chiefly Parsees—have been studying under Mr. Robertson at Sydapet, where they have nearly completed a three years course. Mr. Robertson thinks that the best of them will, on completion of their course, be qualified to give elementary instruction in agriculture to school classes. For the six classes which we propose, then, six men would be required. After consulting Mr. Robertson, I propose that we offer each of the six young men whom he may select a salary of sixty rupees per mensem. And this would constitute the sole charge of establishment for the classes. Here, then, we have our teachers at hand. In future the Poona College will produce teachers.

12. The next question is, what shall be the curriculum? Here again, fortunately, Mr. Robertson has a little book, almost quite ready, in English, on this very subject of elementary agriculture, called the agricultural class-book, based on the books published in England and adapted for the use of Indian schools after an experience of several years in Southern India. This book comprises elementary instruction in—

- I. Soils.—Origin, formation, distribution, tillage.
- II. Manure.—Varieties, action, uses.
- III. Crops.—Varieties, culture, uses.
- IV. Stock.—Races, breeding, feeding, general management.
- V. Implements.—Machines, tools, water-lifts.

As already seen these students must know English, therefore this book will suit them exactly. So much for the in-door curriculum.

13. There remains the matter of the out-door curriculum, which is of primary importance with respect to agriculture. It is in the field that the students must practice the principles of which they have read in the agricultural class-book. For this purpose Mr. Robertson thinks that at least six acres would be needed for each class; this area is a minimum; ten acres would be better; but as economy is essential, we must be content with a minimum. The six acres are made up thus—one acre would be wanted for ploughing deep and sowing; two acres for rotation of crops; one acre for exhibition of manure; one acre for irrigation; one acre for perennial crops as distinguished from annual crops. As near to the school as possible, then, six acres of land would have to be rented, for at least ten years, in order to give the experiments fair play; though a twenty years' lease would be better. Irrigable land would be preferable; but as just seen it would not be absolutely necessary that more than one acre out of the six should be irrigated; therefore the six acres may be unirrigated land if irrigable land be not available in the locality. The rent of six acres of land then at, say, ten rupees an acre, or sixty rupees in all, would be an annual charge against the class; which is moderate. There would be some initial outlay which, after consulting Mr. Robertson, I find would be in this wise: one iron plough Rs. 25; one pair of bullocks 80 to Rs. 100; one cart Rs. 80; implements and tools Rs. 50; but for one field labourer, and shed for pair of bullocks, say Rs. 50; fencing Rs. 20—in all Rs. 325; to which add Rs. 100 for seeds, manure, and miscellaneous—total 425. The upkeep of the bullocks and the wages of the labourer would together amount to Rs. 30 per mensem, or Rs. 360 per annum. There would be annually recurring contingencies, but these would be defrayed from the produce of the six acres.

14. It would not be practicable at present in these school classes to afford out-door veterinary instruction—though the principles of it would be taught in the class-book.

15. The annual charges then of a High School agricultural class would be thus:—

|                                                          |     |          |
|----------------------------------------------------------|-----|----------|
| Teacher (at Rs. 60 per mensem)                           | ... | Rs. 720  |
| Rent of six acres                                        | ... | 60       |
| Wages of one labourer and upkeep of one pair of bullocks | ... | 360      |
|                                                          |     | Rs. 1140 |

The initial outlay would be Rs. 425. These figures have been carefully verified by Mr. Robertson. For six such schools the annual outlay would be Rs. 6,840, and the initial outlay would be Rs. 2,550. These expenses seem moderate. If the whole of them cannot in these times of financial pressure be afforded, still a portion of them certainly can be afforded; that is, if six classes cannot be afforded, we may begin with four classes, and so on.

16. The annual expenses of an agricultural class at the Poona College is, as already seen, set down at Rs. 6,000. Thus the annual cost would be for—

|         |     |            |
|---------|-----|------------|
| Schools | ... | Rs. 6,840  |
| College | ... | 6,000      |
|         |     | Rs. 12,840 |

and the initial outlay Rs. 2,550, say with extras Rs. 3,000. With these moderate sums a humble but sound system of agricultural education might be set on foot in this Presidency. A beginning might be thus made. If it should succeed, then the outlay might be augmented hereafter according as the demand might grow or as our financial means might increase.

17. If my Honourable Colleagues shall approve, the Director of Public Instruction might be requested to arrange to open the six High School classes from the commencement of the next official year, that is, in April 1879. It should be explained, however, that the teachers from the Sydapet Institution cannot join till June, as they will not have completed their course and obtained their certificates until that time. However, it will suffice for them to join by the 1st or even the 15th June, when the agricultural year begins.

18. The foregoing remarks apply to what may be termed superior instruction in agriculture in the upper schools in English. Our object should farther be to scatter broadcast as it were the elements of such instruction among the middle schools in the vernacular. Now although six acres represent the minimum area on which superior instruction can be afforded, Mr. Robertson thinks that some elementary instruction, which would be much better than nothing, could be afforded to a vernacular class even on one acre. If there were difficulty in exhibiting ploughing, still the rotation of crops, some of the methods of culture, and the use of artificial manure, could be exhibited even on this small space. One teacher, trained in the superior classes above described, might in some localities serve several schools, say three; then if his salary were, as before, Rs. 60, the charge to each school would be Rs. 20, or Rs. 240 per annum; to which would be added Rs. 10 for rent of one acre and some small initial outlay, say from 100 to Rs. 200. It is impossible to estimate exactly the cost, but it manifestly will be but small; and if these classes became at all popular, the village headmen and other peasant proprietors will be sure to render help in defraying the charges. If teachers shall be obtainable such classes would soon multiply, and men will be qualified (natives of this Presidency) at the Sydapet Institution by the middle of next year. In after years they will become qualified in our own superior classes. As regards the curriculum the agricultural class-book in English alluded to will be soon translated into the vernacular; or rather a Vernacular class-book of a similar scope will be prepared.

19. Besides the agricultural instruction given, together with experiments on the ground, some rudimentary instruction can be given in all primary schools by means of a primer of agriculture in the vernacular. Mr. Robertson will, as I learn, be good enough to assist in preparing such a primer suited to the circumstances of this country, and then we can soon have it translated into the vernacular. When the teaching of the primer shall be established in the primary schools, some arrangements might be made for having itinerant instructors going about and lecturing from school to school, showing some simple experiments, illustrating the things taught in the primer, and so on. Arrangement of this sort has, I believe, been adopted with success in some countries.

20. One effective method of diffusing a knowledge of agriculture among the land-holding classes is to ensure that our native Revenue officers and officials shall graduate in this science, the Mamlatdars, the Mahalkaris, and those Karkuns who hope for promotion to the higher grades. We are already endeavouring to arrange that all these officials shall be graduates of the University. If a degree in agriculture shall be established by the University, then a preference might be given to that degree over other degrees for this particular class of appointments. Or else it might be ordered that all officers and officials in the land revenue department must go through an agricultural course, as above described. Further, as the system of the College course, the other grades through the school course, as above described. Further, as the system takes root, it will not be difficult to arrange that all headmen (Patils) and village accountants (Kulkarnis), whose hereditary appointments require the confirmation of the authorities, shall pass some elementary examination in agriculture.

21. My Honourable Colleagues will doubtless agree with me in acknowledging our obligations to Mr. Robertson for the interesting information and valuable advice which he has afforded us, and to the Madras Government for so kindly lending us his services for a short time.

RICHARD TEMPLE.

Minute by the Honourable Mr. Gibbs on Agricultural Education, dated 1st November 1878.

I entirely concur in the exhaustive Minute of His Excellency the President, and shall be very glad to find that funds can be provided to carry out all his suggestions.

It is quite time we instituted schools for this purpose. In Guzerat the want has been so much felt by the enterprising land-holders in Kaira that they have availed themselves of the institution at Sydapet in Madras; and from what was said at the conference held at Ganesh Khind about two months ago, it would appear that a desire very generally exists to improve the cultivation by rotation of crops, manuring, and other plans which can only be communicated by those trained in Europe; and although experience has taught the natives of this country to utilize many of the resources which nature has provided for them, still the spread of agricultural science will doubtless lead them to make greater use of those resources, as well as to find out others, which, although now existing, are unknown to them.

The measure is one which seems to me likely to increase the wealth of the people in a most substantial way; and though doubtless any very great strides in this direction are not to be expected at once, still we must remember that every student who leaves such a school may be looked on as a pioneer to instruct his fellow villagers and so render his own knowledge tenfold more valuable to the common weal.

Our thanks, as suggested by His Excellency, are due to His Grace the Governor in Council, Madras, for so kindly placing Mr. Robertson's services temporarily at our disposal; and I venture to think that not only to him for the information he has given, but also to Dr. Cooke, the Principal of the Civil Engineering College, for the ready response he has given to His Excellency's wishes, our thanks are due.

J. GIBBS.

Minute by the Honourable Mr. Ashburner, dated 3rd November 1878.

I approve of the scheme for the establishment of an Agricultural and Veterinary Class attached to the Poona Engineering College.

L. R. ASHBURNER.

RESOLUTION.—In reference to the foregoing Minutes in Council the Governor in Council decides that a College class for instruction in Agriculture should be attached to the Civil Engineering College, Poona, and declared open for students who have passed the University Matriculation Examination.

~~Two~~ years should be fixed for the present as the period for the course of study. The Finance Department will be asked to sanction scholarships tenable for one year, according to the list given in the next para., to be competed for (1) by the students entering the class, and (2) by those who have completed their first year. As care is necessary to prevent students joining the class for the sake merely of the scholarships, and with no serious intention of making any practical use of agricultural knowledge, the Scholarships should not, as a rule, be awarded as a greater proportion than one to every two candidates in the class, and the Principal of the College should have the power at his discretion to withhold them altogether should he consider the candidates undeserving of them. At the same time, within the maximum number below stated, the Principal should be given discretionary power to increase the proportion of Scholarships to the strength of the class, in the case of deserving candidates whose poverty is undeniable, or who belong to the agricultural classes.

It is possible that hereafter it may be proper to reduce the ordinary proportion of one Scholarship to two students, but it is important to offer to students a fair inducement to start the class.

2. The scale of Scholarships proposed as a maximum is as follows:—

|                                               |                  |     |     | Per mensem. |
|-----------------------------------------------|------------------|-----|-----|-------------|
|                                               |                  |     |     | Rs.         |
| To be competed for at Entrance Examination... | 2 at Rs. 10 each | ... | ... | 20          |
|                                               | 2 at " 8 "       | ... | ... | 16          |
|                                               | 4 at " 7 "       | ... | ... | 28          |
|                                               | 1 at " 6 "       | ... | ... | 6           |
|                                               | 1 at " 5 "       | ... | ... | 5           |
|                                               |                  |     |     | 75          |
|                                               |                  |     |     | —           |
|                                               | 1 at Rs. 12      | ... | ... | 12          |
|                                               | 3 at " 10 each   | ... | ... | 30          |
|                                               | 1 at " 9         | ... | ... | 9           |
|                                               | 4 at " 8 each    | ... | ... | 32          |
|                                               |                  |     |     | 83          |
|                                               |                  |     |     | —           |
| Total per mensem...                           |                  |     |     | Rs. 158     |
|                                               |                  |     |     | —           |
| Per annum...                                  |                  |     |     | Rs. 1,896   |

3. The Scholarships according to this scale, even if all awarded, will cause an expenditure less than that proposed by the Committee by Rs. 744 per annum; and the Governor in Council being of opinion that it is of great importance to add a course of Veterinary Lectures to the instruction to be given in the class, would allot Rs. 600 for this purpose—Rs. 300 being assigned for 25 lectures to students of the first year, and Rs. 300 to 30 lectures to students in the second year.

4. In respect to the establishment of agricultural English classes at six of the High Schools in the Presidency, the Director of Public Instruction is requested to take steps in accordance with the principles laid down in the Minute by His Excellency the Governor and to submit proposals in detail after local enquiry. The several Commissioners and Collectors are requested to aid the Director in this important matter to the utmost of their ability.

5. A similar instruction is applicable respecting the establishment of Vernacular Classes according to the principles laid down in the Minute.

C. GONNE,  
Secretary to Government.

The Director of Public Instruction,  
The Financial Department,  
The Commissioners of the Northern, Southern, and Central Divisions,  
All Collectors,  
The University Registrar,  
Colonel T. Waddington,  
T. Cooke, Esquire,  
Surgeon-Major W. Gray,  
J. G. Moore, Esquire,  
The Revenue Department.

*The Govt. of Madras (by letter)*

Ordered—That copies of the above papers, which were published in the *Government Gazette* under No. 1442 A. of 2nd instant, be forwarded for the information and guidance of the Officers and Departments noted in the margin.

*Gonne*

Secretary to Government.

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N<sup>o</sup> 1502 of 1878.

Educational Department,  
Bombay Castle, 12<sup>th</sup> December 1878.

From,  
C. Gurnee, Esquire,  
Secretary to Government,  
Bombay.  
To,  
The Chief Secretary  
to the Government of  
Madras.

Sir,  
In continuation of  
my letter N<sup>o</sup> 1289 of the 26<sup>th</sup> October  
last I am directed to forward a  
copy of the proceedings of this  
Government, regarding the con-  
-mencement of Agricultural Edu-  
-cation in this Presidency N<sup>o</sup> 1501  
of this date, and again to express  
to the Government of Madras the  
cordial acknowledgments of His  
Excellency the Governor in Council  
for having so readily given this  
Government

Ud 524978  
13 Jan 1879

Government the advantage of Mr.  
Robertson's advice and assistance,  
to which a high value is attached  
by His Excellency in Council.

I have the honor to be,

Sir,

Your most obedient servant

C. G. M.

Secretary to Government

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Barrow 1878 Sept 4

W. 57.09.  
Thurs 13. 13. 17. 18.  
Dodge Barrow

Sat 12. 12. 18.  
Dec. 18. 18. 18.  
W. 15. 18. 18.

Fortunary City  
of Providence regarding  
the Commencement of  
Agricultural Education  
in Barrow Barrow  
Nov. 18. 18. 18.

Dodge  
13. 18. 18.