

Escola Superior de Agricultura e Medicina Veterinaria
Estado de Minas Geraes.

Bello Horizonte,

August 10, 1921.

To His Excellency,

Dr. Arthur da Silva Bernardes,

President of the State of Minas Geraes.

Honorable Sir:

Since our last conference, which was held on June 16", 1921, I have made daily visits to the Agricultural building where the architect was drawing up plans for the buildings of the Agricultural College. During this time there have been only two days on which I did not visit the Department of Agriculture. The work has moved along somewhat slowly and it has required an unusually large amount of attention on my part. This is in a measure due to the fact that the architect is not well acquainted with the functions of the different parts of the institution. I wish, however, to compliment the architects for their uniform courtesy and good will. I wish also to compliment the excellency of detail and the painstaking way in which the architectural structure has been worked out. The credit for the architectural effect should be given entirely to the architect.

The immense amount of work necessary to bring together the details of the various structures will never be appreciated by anyone except myself. Unfortunately I was separated from my library, in which was contained all the data necessary for this work. It was impossible to find any books in Bello Horizonte that would be of service to me in this connection. Everyone I asked was willing to help me all they could but they were not familiar with the particular subject in hand.

Plans for the Main Building.

The ideal of the large Central Building was strongly advocated by the Secretary of Agriculture, Honorable Dr. Cleodomira de Oliveira. Three or four smaller units properly located would probably have been more economical, but probably less satisfactory to the people of Minas Geraes. This matter, however, is not of serious importance. In the course of time, when needed, additional units can be constructed near the line of work the units are to serve.

The plans for a smaller Central Building, about 75 % of the size of the one designed by the architect were thought to be far less desirable by the Honorable Secretary. This contained the class rooms that are now in the Central Building but contained less space for investigation and research. As a whole the plan adopted will be found advantageous to Minas Geraes in the end, and will give her one of the best, if not the best, state institutions. in South America.

Dormatory.

Within a week's time after the preliminary plans for the Main Building had been placed in the hands of the architect, the preliminary drawings for the dormatory were ready and transferred to the architect. This building provides for commodiously accomodating seventy-four students, and if necessary, as many as one hundred and fourteen.

Auxiliary Buildings.

The auxiliary buildings are the most necessary part of the institution but will cost only a small fraction of what the two main buildings cost. These range in size all the way from 3 x 6 meters for hog shelters, to 30 x 18 meters, the field shelter for Farm Mechanics.

There are twenty-four of these buildings as follows: 1, Director's residence; 2, residence for the Professor of Agronomy; 3, field implement shelter for Agronomy; 4, storage and milling house for Agronomy; 5, mule barn for Agronomy; 6, hay barn for Agronomy; 7, corn crib; 8, residence for the Professor of Horticulture; 9, slat house for Horticulture and Pomology; 10, shelter for field tools and implements for Horticulture; 11, residence for the Professor of Animal Husbandry; 12, dairy barn; 13, hay barn for dairy division; 14, mule barn for Animal Husbandry; 15, hog feed house; 16, hog houses; 17, calf shelter; 18, shelter for field tools and implements for Plant Pathology and Entomology; 19, slat house and field house for Forestry; 20, shelter for field appliances in Veterinary; 21, stables for large animals in Veterinary work; 22, shelter for small animals in Veterinary work; 23, food barn for Veterinary animals; 24, field shelter, Farm Mechanics.

The general plans provide for four residences, one for the Director, one for the head of the Animal Husbandry work, one for the head of the Agronomy work, and one for the head of the Horticultural work. These are indispensable, as it is necessary to have the responsible heads of these departments present to protect the state property and also to give direction and stability to the work. The work in Animal Husbandry, in Agronomy, and in Horticulture, cannot be suspended even during the vacation. It will be found desirable and economical to construct residences for the heads of other departments from year to year as financial conditions permit.

Buildings Needed in the Future .

Approximately a year after field operations begin at the institution it will be necessary to have a sugar mill operating on a farm scale. It would be unwise to construct that at once, as it would have to lie idle until a crop was produced that was of sufficient extent to justify a farm size sugar mill. A large percentage of the sugar produced in Minas is made by these small mills. It will be a long time before the farmers of Minas abandon this method of making sugar. In the mean time the present method should be made as profitable as possible. About seventy-five years ago the beet sugar industry of France was seriously threatened by the cheap sugar production in tropical countries from sugar cane. Scientific studies made it possible to make changes in the methods of producing beet sugar and today the beet sugar is competing successfully with the cane sugar on the world's markets. Even in the colder part of North America beet sugar is being produced so cheaply with high priced labor that it competes with cane sugar on the open market.

The farmers of Minas are among the best coffee producers in the world. In spite of this fact, a large percentage of the coffee producers are not fully acquainted with the most economical way of handling coffee from the time it leaves the plant until it is put onto the export market. At the present time it does not seem to be so necessary to greatly improve on the best methods as it is to bring the average coffee production up to a higher state of efficiency. This can be done only by teaching the young men the most effective way of doing the work. We need to establish a small sized coffee plantation as soon as possible and construct the proper buildings and other conveniences without loss of more time than is absolutely necessary.

Plans for the Grounds.

On the first of August the general plans for the grounds were completed and as soon as possible after that were referred to the Secretary of Agriculture, Honorable Clodomira de Oliveira. The different departments have been allocated in such a way as to make them the most useful to the institution as a whole, and sufficiently separated to allow of large expansion in all the departments. The three leading departments, Agronomy, Animal Husbandry, and Horticulture, are each located on the particular piece of land best adapted to their needs. In the course of time the principal Pomicultural work will be conducted on land located across the stream and the vegetable growing continued in its present headquarters. It is also probable that when our herds shall have increased to a reasonably large size for the work the principal grazing lands will be separated from the present central location.

The entrance to the grounds should be from the station of the Leopoldina Railway, which should be located on the line approximately midway between the Dormitory and the Main Building.

The grounds have been so divided and arranged that it will be possible for the next four or five years to conduct experiments and demonstrations near the Railway. This will be an attractive feature, as it will give the traveling public a more adequate idea of an Agricultural College. The grounds along the Railway are admirably suited for this line of work.

The various auxiliary buildings are so located as to make an attractive feature on the landscape. Every one of them is in plain sight from the Railroad. As the institution grows older this will not be so necessary or desirable, but in its incipiency, it will add greatly to its popularity and favor.

Order of Proceeding.

After studying the whole question carefully and knowing the local conditions it would seem that the following method of proceeding would be the most speedy method of attaining our ends.

FIRST. Construct the road leading from the city of Viçosa to where the Main Building and the dormitory are to be located. The most economical location for the road, and, at the same time, the most desirable, is from the end of the avenue that is being constructed in Viçosa. There is a direct opening between buildings about eight meters wide. It would be best to remove one of the small, cheap buildings and give a wider thorough fare. This location would avoid going up a very steep grade and making a very awkward turn in the road. It would require a bridge across the Correga Bartholemew, but that will be necessary no matter where the road is placed. The road should then be projected across the stream to the side of the Leopoldina Railway. This location for the road is the best one that can be suggested, and I am told by the engineers that it is not any more expensive than to follow the side of the mountain and make excavations along the greater part of the route for placing the road.

The construction of the road is a very important item and should be undertaken first. To attempt to utilize the present so-called road leading to the property would be more expensive than the first cost of the road.

SECOND. The next important step will be that of locating the spur of the Leopoldina Railroad. This should be so projected that carloads of building material can be unloaded contiguous to each of the two large buildings. The switch should be so located that when the construction of the buildings has been completed a portion of this track can be utilized as a station on the Leopoldina Railroad.

THIRD. When the work of constructing the highway has been begun and the material is arriving for the buildings, the valla running through this tract should be leveled. If this work is not done before the buildings are constructed it will add very greatly to the expense of leveling the valla.

FOURTH. The Director's residence should be the first building completed. This is of small proportion compared with the work I have mentioned above. The presence of the Director on the grounds will be very much needed at nearly all times, especially will this be so when the foundations of the buildings are being laid. His presence will be of still greater importance when the walls of the various laboratories are being builded. He cannot replace the head engineer, nor is it probable that the head engineer will be sufficiently acquainted with structures of this kind to avoid making costly errors.

FIFTH. The construction of the Main Building should proceed as rapidly as possible as it will require from one to several months to fit up the laboratories with cabinete, water supply, gas, and sewer supply. The length of time required for this work will depend on the delivery of fitting material such as gas pipe, water pipe, sewer pipe, and the availability of workmen for doing the work.

SIXTH. Coincident with the construction of the Main Building the field should be prepared for the work in Agronomy and Horticulture. The grounds will need to be fenced and gotten into shape for receiving various plants and crops. In the case of Horticulture we should have two or three hectares planted to various kinds of fruit trees. For example, it is impossible to give reasonably good instruction to students in the pruning of fruit trees without having a considerable number of trees on which to practise the art. The same is true in the matter of giving instruction in the growing of farm crops, but these mature in

in less time than orchard trees. It also requires time and much work to prepare good pastures for live stock. Time is required, too, to bring together a reasonably good herd for instruction work in Animal Husbandry. It, however, takes less time to prepare for Agronomy and Animal Husbandry than it does for the growing of trees for teaching Pomology. It is necessary, therefore, for us to begin the field work without unnecessary delay.

Trusting that the foregoing information, plans and order of proceeding will commend itself to you, I am,

Very respectfully yours,