

Agricultural Education in Germany



DR. JULIUS KUHN, PROFESSOR OF AGRICULTURE IN THE UNIVERSITY OF HALLE—TAKEN WHEN SEVENTY-FIVE YEARS OF AGE.

IN THE old city of Halle, standing on the east bank of the River Saale, in Saxon Germany, the visitor finds many things which interest him greatly, not least of which is the agricultural department of the university. Had I time I should like to tell about the city whose history runs back many centuries into the dim past; of the sturdy Halloren ("salt makers") who bravely struggled for right and liberty, but who finally went down before the powerful and persistent tyrants who lived in the neighboring castle of Gleichenstein; of the castle itself perched on a volcanic rock mass two or three hundred feet above the river at its base, now a gigantic ruin; of the castle of Moritzburg, built by another tyrant on the riverside in the city, for subjugating the liberty-loving people, and this, too, a mass of ruins. There is much that might be said about the university, with its 3,000 students, its buildings, its library, its long roll of great men who have taught or studied here. But there is not time for these. I can take but a brief glance at one department of the great university, that of agriculture.

More than forty years ago Dr. Julius Kuhn was appointed professor of agriculture in the university. Through his efforts a fine department has been organized, equal to that of any other subject in the university. Agriculture is here regarded as a branch of study quite on a level with other subjects, and it has long been accepted as one of the subjects which a student may pursue in his study for the highest degree bestowed by the university, namely, that of doctor of philosophy. Prof. Kuhn ranks as high as any man in the faculty. It was my good fortune to be invited to a conference with him, and I found him to be one of the most charming men that I have ever met. At nearly 80 years of age he has still the spirit and enthusiasm of a young man. I forgot his age in listening to his earnest, buoyant discussion of some of the difficult problems with which he is now engaged.

The department of agriculture occupies an irregular block in the city, and a still more irregular tract of land in the suburbs. The latter is the farm and experiment station, while the former contains the buildings, laboratories, museums and collections which are used in instruction. The buildings are of solid brick construction, and number six for instruction purposes and as many more for the housing of the samples of domestic animals which are kept here for illustration. The buildings occupy the borders of the block, leaving the interior for illustrative plots and yards for exhibiting the animals. Here are hundreds of small plots on which are grown illustrative samples of all of the obtainable varieties of grains, grasses, forage plants, fruits, vegetables, medicinal, ornamental, poisonous and other plants of economic interest. Here is a meteorological station, fitted up with a full set of automatic apparatus, which makes continuous records of everything connected with the weather.

I have not the time or space in which to tell all about the animals which are kept

here for illustration and study. I found all of the breeds of cattle that I had ever heard of and some that appear to be unknown in America. They are kept in box stalls, so that they are free to move about, and each breed is distinctly labeled in large letters, so that one may see at a glance what kind of an animal is before him.

Of wild cattle there were at least half a dozen species, some of which are as interesting as anything that one sees in a menagerie. Of some of these there were hybrids, but I was told that no hybrids had yet been secured between the common cattle and the water buffalo of the Caucasus region. A hybrid between these is much to be desired, since the water buffalo is very strong and hardy and well adapted for heavy draft purposes, but all attempts at securing hybrids have entirely failed.

Of sheep I saw some very interesting wild forms, as well as good samples of all the cultivated varieties, including the curious "big-tailed sheep" of the far east, and many promising crosses. We saw some interesting crosses between the wild hogs of Europe and some of the cultivated breeds. They looked sufficiently wild to suggest that they might be immune against all of the diseases to which the well-bred hog is heir on account of his high state of cultivation.

I was greatly interested in a pair of wild horses (2-year-olds) which Prof. Kuhn had recently imported from Central Asia, where horses of this kind have lived from time immemorial. They were sleek, plump, light bays, and looked a good deal like the breed which I used to know when a boy, under the name of Canadian horses. I should like to know the results of the breeding of these wild Asiatic horses in central Europe, especially the results of the crosses with European horses which it is proposed to make later.

On the farm, which is about a mile away, we found good and extensive buildings, and a large assortment of modern farm tools and machinery. The fields bore evidence

of very careful cultivation, and we found that many lines of experiments were in progress. There were the usual experiments to test the relative value of new and old varieties; experiments to test the value of different rotations of crops; experiments to test the relative value of deep and shallow cultivation; experiments to test the relative expense of steam and horse power in field work as plowing, preparation of the soil and handling the crop; experiments in the use of various fertilizers, etc., etc. I was interested in a tract which was set aside for experiments in regard to methods of exterminating nematodes (certain minute parasitic worms) from the soil, but was unable to learn whether or not they had been successful. One thing which struck me as very odd on this university farm was the fact that many stout women were employed in field work. The teams were driven by men, but the necessary hand labor in the care of the experimental plots was nearly all done by women. I suppose they are more careful than men, and this is probably the explanation of the matter. But it looked very odd to us, all the same.

Coming back to the buildings in the city we were shown over the many rooms devoted to different lines of work and study. In one large building is the museum of animal husbandry, in which are preserved the skins and skeletons of typical animals of different breeds, and also those of the many hybrids and crosses which they have made. I should have enjoyed staying here longer, but had to hurry along to the soil museum and the museum of plant products, the botanical museum, the collection of injurious fungi, of economic plants and the machinery hall, where are kept samples of all kinds of agricultural tools and machinery, etc. I must not forget the fine library, filled with agricultural books and periodicals from all parts of the world and in all languages. Here I found many of our American books and reports, showing that the shrewd Ger-

mans do not propose to let us keep our knowledge to ourselves.

I was glad to learn something of the course of study which agricultural students are expected to pursue. I found that there is a careful balance maintained between the different subjects which enter into the education of the student in agriculture. The German student of agriculture is not permitted to become a mere empiric, knowing only the practical side of the subject, but he is required to take up many courses of collateral and accessory subjects. Thus he takes physics, (three courses) chemistry, (eight courses) mineralogy and geology, (two courses) botany, (eight courses) zoology, (three courses). That looks pretty stiff to an American student, doesn't it? In addition he must take work in political economy, (three courses) and law (three courses). Of the agricultural subjects he must take work in agronomy and horticulture, (six courses) animal husbandry and dairying, (seven courses) agricultural economics, (seven courses) and agricultural engineering (six courses). When a young fellow goes through all this, after the usual preparatory work in language and mathematics before entering the university, he comes out with a scientific and technical training that enables him to take up almost any problem which he is likely to meet.

I have to say that I was much surprised at the extent and thoroughness of the work which I found, and I bade goodby to the venerable professor who has built up this fine department with a feeling of admiration for the man and the work which he has accomplished.

CHARLES E. BESSEY.

His Character

An Irishman was charged with a petty offense.

"Have you anyone in court who will vouch for your good character?" queried the judge.

"Yes, sorr; there is the chief constable yonder," answered Pat.

The chief constable was amazed. "Why your honor, I don't even know the man," protested he.

"Now, sorr," broke in Pat, "I have lived in the borough for nearly twenty years, and if the chief constable doesn't know me yet, isn't that a character for ye?"—Town Topics.

Unaccountable Conduct

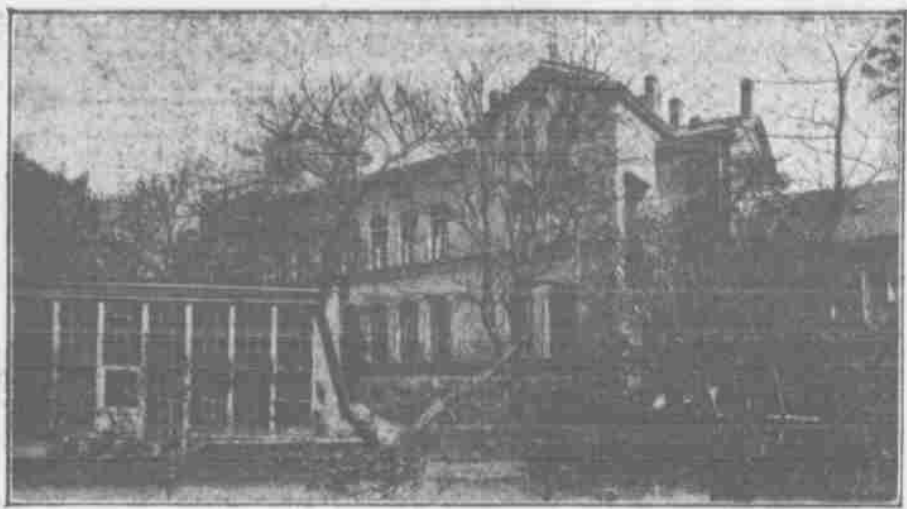
The man with the watch passed it over the show case.

"I think it needs a thorough cleaning," he said.

The jeweler opened it and inspected it with his eye glass.

"It looks all right," he observed. "What seems to be the trouble? Has it been stopping?"

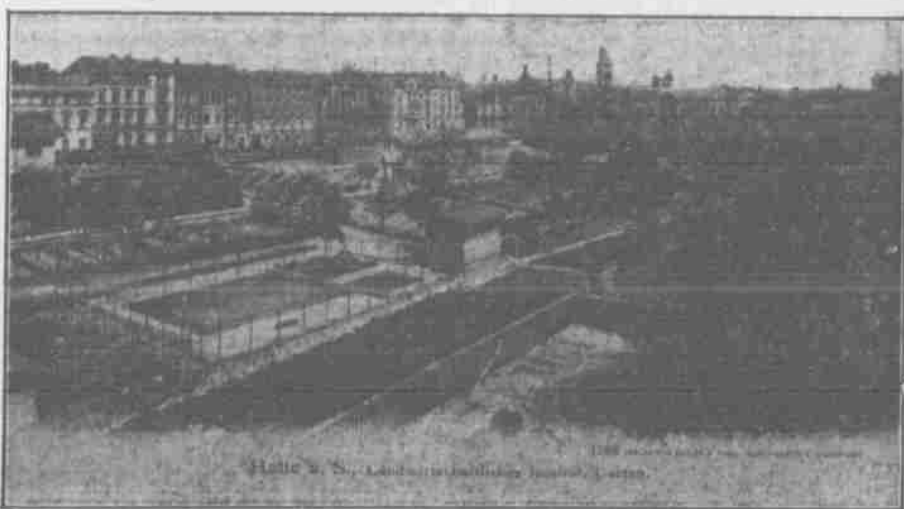
"No, but it's acting strangely. You know you've never been able to keep it from gaining two or three minutes a week. Well, it has begun to keep perfect time lately."—Chicago Tribune.



ONE OF THE BUILDINGS OF THE DEPARTMENT OF AGRICULTURE OF THE UNIVERSITY OF HALLE.



THE BOTANICAL GARDEN OF THE UNIVERSITY OF HALLE WHERE THE AGRICULTURAL STUDENTS TAKE UP THE STUDY OF PLANTS.



GENERAL VIEW OF THE ILLUSTRATIVE PLOTS OF THE DEPARTMENT OF AGRICULTURE OF THE UNIVERSITY OF HALLE.