

come manifest when they are conducted on the large scale. Again, specimens of the different races of cattle, sheep and swine, need to be accessible to the learner, that he may have an opportunity to familiarize himself with their relative merits, or peculiar adaptations. Further the different branches of farming, as dairying, raising fat cattle, grain production, the nursery business, &c., have each characteristics to which the attention of the student should be directed by example as well as precept. Finally, the agricultural school ought not only teach the items or elements of farming, but ought to instruct in the highest and most advantageous combinations of these elements, in the best *systems of farming*, and the general management most appropriate to various economical and climatic conditions.

These ends it is customary to seek to accomplish in two ways. Either as at Tharand, the farms in the vicinity are visited by the students in company with their teachers, or as at Hohenheim, Grignon and Cirencester, the institution itself is connected with an extensive estate, where, as far as practicable, every branch and subject of agriculture is practically illustrated on a business scale.

In attempting to decide which of these plans is the best, a great variety of considerations must be weighed. We must not for a moment allow authority or precedent to influence our opinions. Neither is it safe to rely in an indefinite manner on the experience of the old world. Doubtless for the peculiarities of each school that has been established in Europe, some local causes may be traced. Their peculiarities are not the result of whim. Let us consider some of the circumstances that attended the foundation of the Hohenheim Academy. The kingdom of Wurtemberg at that time, was a country not remarkable, I believe, for the fertility of its soil, and inhabited by a poor, though industrious people. The system of farming was hardly improved over the three-course rotation that dates back to the time of Charlemagne. The same wretched old implements were in use, and the soil could not be made to support its dense population with anything like the comfort, now-days deemed indispensable. An agricultural revolution was wanted. The student in the newly-established academy had to unlearn much of the knowledge he might have gained at home. The farms of the country could not supply him with illustrations of good rotations, of convenient implements; of thorough tillage, of improved stock, and it was absolutely necessary that the school should provide itself with these things as parts of its apparatus. Furthermore, the old habits of husbandry that had been rooted in the people for centuries, were not to be extirpated by mere talk. That something better could be done, must be proved by arguments admitting of no fallacy—by demonstration; and so a farm was made the basis of the school, and on it the doctrines taught in the lecture-room were carried into remunerative practice.

In Saxony, on the other hand, at the much later period when the Tharand school was established, circumstances were different. The Saxon people were in possession of a much more perfect agriculture. Many pupils of the Hohenheim school had put into practice its doctrines. Well-conducted farms were not rare, and the land owners were largely imbued with the spirit of innovation, for flourishing manufactures and commerce had put them on a level with the times. There was not so imperatively needed a farm to illustrate and enforce new doctrines. The country abounded in illustrations. Let me not be understood as assuming that the circumstances mentioned have alone originated this difference between the two institutions; but no one can fail seeing that their influence has been very great. Doubtless the question of expense has had no little share in deciding upon the appointments of many of the newer schools.

In our older States there are abundant localities where an agricultural school might safely rely upon finding within reasonable limits, almost every desirable illustration of improved agricultural practice, and examples of the best implements and stock—localities where nearly every advantage that could be expected from an extensive farm connected with a school, might be derived from excursions to the farms of neighbours. On one farm would be found a dairy, on another specimens of superior breeding cattle, on another fine sheep; here the benefit of thorough draining, there of irrigation could be witnessed, and, although some desirable improvements were at first wanting, they might doubtless be supplied in a few years, through the influence of the school itself. *It thus appears entirely reasonable, and has been abundantly proved in Europe, that with a building and a corps of instructors not more extensive than many of our country academies possess, it is possible, with the help of a few acres of garden, and excursions to the surrounding farms, to accomplish nearly everything desirable by way of Agricultural Education.*

What then are the advantages of an extensive farm connected with a school for American farmers? This question will be discussed in a future article.