

been established by the government, or by individuals in the Austrian dominions—in these the course of study generally lasts three years, in which time the pupils are instructed in natural philosophy, chemistry, natural history and veterinary medicine; while upon large experimental farms they are taught agriculture, the management of fruit and forest trees, and the care of cattle, sheep, swine and bees.

An agricultural school was amongst the means adopted by Leopold to meliorate the condition of Tuscany; and that Duchy is now amongst the best cultivated and most productive districts in Europe.

The Emperor Napoleon organised and endowed the national school at Alfort. "Here," says a statesman, who resided some years in France, "all the branches of science connected with agriculture are taught—chemistry, belong the anatomy of cattle, farming, with the mechanics, and as much of geology as is known, and farm work, and domestic economy in every branch, and down to the smallest article are there exhibited and explained. It was believed in 1810, that this academy had tended much to enlighten the people of France on the general subject of husbandry, as well by the examples it gave of new and improved machinery, and the most successful objects and modes of culture as by sending abroad into the provinces many scientific and practical men, who carried their knowledge with them, and were the means of introducing new and improved practices."

In 1808, the King of Prussia established a school of agriculture; in twelve years the value of the farm was increased from 2000 to 12,000 dollars; Van Thaer, is director, and under him there are three professors—one for mathematics, chemistry and geology; one for veterinary knowledge; and a third for botany, and the use of the different vegetable productions in the materia-medica, as well as for entomology.

Your committee will suggest some of the many advantages likely to result from the establishment of the proposed institutions.

First—Agricultural schools will collect the best systems and most recent improvements in husbandry from Europe and America—analyze and adapt them to our climate, our soils, our productions, and our wants; demonstrate their utility in practice, and disseminate a knowledge of them into every part of the state. The Hofwyl farm will serve to illustrate the extent of these advantages. The whole establishment comprizes but 214 acres; and the average annual profit, of the pattern farm alone for a period of four years, was found to be about 4000 dollars, exclusive of the cattle concern which was kept separate. We are furnished in Rees' Cyclopaedia, with numerous statements, demonstrating the superiority of the new, over the old system of husbandry.

We need not resort to Europe, for evidence of the disparity which exists between the old and new systems of husbandry; every day's observation affords proof in our practice; why, in passing through the country, do we see one farm thrice as productive as another, with equal natural advantages? This contrast cannot be owing entirely to indigence, or to indolence, in the unsuccessful cultivator; it proceeds rather from the want of method—of knowledge—knowledge is science—and science is only precepts and principles grounded on demonstration.

It has been said that agriculture is a trade, an art, or a science. That as a trade, it requires only the exercise of bodily power; that as an art, it employs the understanding and the judgment; and that as a science, it comprehends a knowledge of natural history, of chemistry, &c. so far as these are subservient to the improvement of husbandry. We have many who follow the trade, less who practice the art, and but few who understand the science.

The introduction and multiplication of improved machinery, would be an important benefit from the proposed schools—It is believed that ten millions of dollars would result to the agriculturists, if one half of the grain grown in the United States, should be threshed by the improved mills, and it has been estimated that the general use of Wood's cast iron ploughs, would effect an annual saving of eight thousand dollars, in the small state of Rhode Island. The schools would be competent to investigate the principles, and to test the merits of the implements now in use; and of those which genius and skill may hereafter bring forth. Their opinions would inspire confidence in those found to be approved. Genius would thus be encouraged, and imposture put down.

Experimental farmers, of whose operations accurate details would be kept, would furnish lists of the value of grains, grasses, plants and animals, which might be introduced from abroad, or but partially known amongst us, they would instruct us in their culture and management, and do much towards establishing general and salutary principles in the business of husbandry. It is not enough to know what experiments prove successful—we ought also, to be advised of those which have proved unsuccessful, in order that we may avoid errors. "The art of agriculture can never be brought to its highest perfection, or established on rational principles, unless by theories, tested by actual experiments. It is full time, therefore, by the establishment of experimental farms, to bring the art to its utmost practicable perfection." The public would be made acquainted with the important facts developed by the operations of these farms, through the public prints; and the students would disseminate a knowledge of them orally, and by their practice.

Horticulture would be improved, and its benefits extended by these schools; a knowledge of grafting, inoculating, transplanting and pruning fruit trees; of the varieties of fruit, and of culinary vegetables and their management, all useful qualifications to every man, and may administer to his comfort, as well as profit.

Secondly—To commerce and manufactures, the benefits will be in proportion to the increased products and profits of agriculture.

Thirdly—Schools of agriculture will improve the morals of society. The students will carry with them, to their dispersed homes, constitutions hardened by the salutary influence of field labour; minds invigorated by useful knowledge, and familiar with the best systems of husbandry; habits of reflection, of industry and sobriety; and a laudable ambition to excel in a business whose private gain, is always public good.

Fourthly—Schools of agriculture will tend to improve the revenues of the state; the increased amount of assessable property, and the augmented receipts of turnpike companies, consequent upon the increase of the products of agriculture, will abundantly remunerate the public advances—our situation is singular.