fication for this work as will inspire general confidence, no system of administration can be successful, and competent men will not accept a place of such responsibility and importance while their work is always liable to interruption by the agencies of partisan politics. The inadequacy and failure of the present system of control and administration are inherent in the system itself, and are inseparable from its relation to partisan change and caprice. The evil is not to be remedied by merely changing the persons who administer a system which is essentially vicious.

If the people of the State of New York have enough regard for their own interests to lead them to insist upon the adoption of a system embodying the essential features of competent direction and security from partisan interference, it will be safe and wise to acquire the whole Adirondack region by purchase. If they have not this perception of the importance of the object in view, and of the means which are necessary for its accomplishment, the forests will be left to their fate. The methods now employed are wholly useless and ineffective.

## THE UTILITY OF AGRICULTURAL EXPERIMENT STATIONS.

THE Hon. W. W. Wright, in a recent address on the past and present work and future prospects of the Geneva station, New York, took occasion to uphold the usefulness of such stations. The establishment of an experiment station by the State near Geneva within the last seven years challenged a great deal of curiosity among farmers and others, and is of late creating more and more of interest. To most people it was entirely new, nothing of the kind being nearer than adjoining States; and it may be said to be a modern invention, but cannot be called a "Yankee contrivance," for England, France, Germany, and other European countries, led off in the creation of these establishments within the present century, and had expended many millions of dollars in their organization and maintenance before any of the American States had established one. New York was among the last to avail itself of these institutions, though its wealth, extent of territory, and diversified agricultural interests, would naturally have made it the first. In one sense, such a "station" is no "experiment." In its organization, management, and the results to be expected, we have only to look to other civilized countries, which have had an experience, in some cases, of nearly forty years. When the Legislature of New York passed the law for creating this station, the significant fact was before us that neither in this country, nor in any other, had these stations been established, except they had fully answered the expectations of their projectors, and had been cherished and sustained, because their benefits were so manifest that there was no hesitation about continuing appropriations for their maintenance. Agricultural colleges, and classes in universities in which scientific farming was taught, were established or endowed in New York, but they cannot be said to have been successful. The most extensive of them was totally abandoned after a few years; whereas no experiment station has ever been discontinued, or diminished in the scope of its work, or embarrassed in the want of funds, in this country or Europe. On the contrary, in foreign countries they have been multiplied to an enormous extent, and have steadily increased on this side, though not so rapidly. There must be some reason for the success of these stations, and the total or partial failure of the colleges. The truth is, they are both schools, in which there is little difference in the abilities and qualifications of the teachers, but there is a vast disparity in the number and character of the students. In colleges we teach a few hundred boys, only a small percentage of whom will become practical farmers; while the stations are endeavoring to teach the same science to a whole community of men of all ages and conditions, engaged in the business of agriculture, not alone through lectures in which the relations of science and practical farming are explained, but through the agricultural press, and pretty much all newspapers now published and circulated in this country, daily, weekly, and monthly; and these are supplemented by bulletins giving in detail appropriate facts and statistics of the greatest interest to those who desire to become better informed in a business which occupies their constant thoughts, and in most cases the labor of their hands. Through these channels the stations reach the whole agricultural community. Nobody is too illiterate to participate in this knowledge, if he can read, or understand what others read to him. Nobody is too old to learn in this "school;" and he soon becomes almost unconsciously a teacher himself, for he imparts the knowledge he has thus acquired to others, in farmers' clubs and neighborhood gatherings, in the village tavern or post-office, at the country firesides, in the fields and on the highways, in an unpretentious but none the less effective and valuable way. He tests the theories of the professors, lecturers, and newspaper-writers by his invaluable practical knowledge and common sense, and often detects the errors into which theorists are always liable to fall, and thus renders valuable service to the true interests of agriculture. It may happen in this way that men who have never learned to read or write, but are capable of managing a farm well, may become valuable teachers in a limited sphere.

The first agricultural experiment station was established in Germany in 1851, and since that time the number of stations has steadily increased, until at present the number in the German Empire alone is given as 184. Careful statistics, including nearly every country of Europe, show that if New York should expend an equal amount, proportioned to the area of our territory, we should expend one million dollars annually. If, on the other hand, it were proportioned to our population, it would require an annual expenditure of three hundred thousand dollars before we should be on a level with the countries of Europe. The first station, as has been stated, was established in 1851 at Moeckern in Saxony; five years after, there were 6 stations in existence; five years later, 15; in 1866, 30; and in 1871, 56; since which time they have been even more rapidly increased.

Those who may perhaps regard the work done at Geneva as rather of scientific than practical value will be gratified to learn what work was entered upon and continued at this first station at Moeckern during the first six years of its existence. This is given in a summary recently prepared, comprised under twenty-six different heads. We select but a few of them: 1. Feeding-trials with sheep to ascertain the best maintenance rations; 2. Feeding-trials with cows, showing effect of coleseed-cake on yield of milk; 3. Feeding-trials on fattening sheep; 4. Observations on the yield of manure of cows and sheep, and the changes it suffers by keeping; 5. Comparison of feeding-value of grass, hay, and aftermath; 6. Observations on milk-production in passing from winter to summer feeding; 7. Effect of lupines on milk-production; 8. Composition and value as food of various kinds of distillery and brewery waste; 9. Feeding-trials with cows, oxen, and calves, the proper proportion of nitrogenous and non-nitrogenous food-elements for the three classes of animals, etc.

## THE ENCOURAGEMENT OF HIGHER EDUCATION.[1]

THE choice of the 22d of February for the founder's day of the Johns Hopkins University will always be recognized as singularly appropriate. Historic associations, at once local and national, determined the choice.

It is a fact not generally known that the Father of his Country, before he became President of the United States, was the president of a Virginia college. When Washington was chosen to the office of chancellor of William and Mary College, succeeding the Bishop of London in that educational honor, he assured the board of trustees of his firm confidence "in their strenuous efforts for placing the system of education on such a basis as will render it the most beneficial to the State and the republic of letters, as well as to the more extensive interests of humanity and religion." Washington was always the friend of William and Mary College, his *alma mater*. Without forgetting local institutions in Virginia, he advanced during his eight years' presidency of the United States to what may be called the national idea in university education. From that idea Baltimore to-day can derive encouragement and inspiration.

Washington's grand thought of a national university, based upon individual endowment, may be found in many of his writings, but

[1] Abstract of an address by Professor Herbert B. Adams, Johns Hopkins University, Feb. 22, 1889.