

tiveness, became alarmed, and sought how best to apply Liebig's theory. The nations of Europe began to found institutions for this purpose. Germany took the lead. And the result is that to-day she has no less than 184 agricultural colleges and experiment stations. The duty of these is not only to learn all that can be learned of the capacity of the soil and the methods of renewing and enriching it, but to bring the results of these experiments to the table of every farmer in the land. In England, too, this impetus to agriculture was soon felt. The introduction of artificial fertilizers soon more than doubled the product of the English fields per acre. While the normal yield fifty years ago was no more than about 13 bushels per acre, the average during the last few years has reached as high as 29.9, and the report for 1885 was 31.24 per acre. Practical experiments, too, speak loudly for science in farming. It was tested in England. On the unmanured fields the crop has steadily declined, the average for 33 years being 13 bushels per acre; the average for the last 10 years being only 10½ bushels per acre. The fields treated with *artificial* manures have yielded upon an average from 27 to 36 bushels per acre during the last 33 years; while the field treated with *farm yard* manure has steadily increased in fertility, yielding upon an average 33½ bushels per acre and in 1885 yielded 40⅞ bushels per acre. Will you be convinced by figures and facts? Let us turn to history and read what ignorance in regard to agricultural science and especially ignorance in regard to the part that forests bear to agriculture has treated the world. At the time of the Cæsars, the poet says, that Northern Africa was the granary of the Roman Empire, and teemed with an agricultural population. But the country was denuded of its ancient forests, mother earth was drained and never replenished, and the consequence is that the shifting sands of Sahara have driven out the inhabitants, and buried up the grand achievements of ancient civilization. Palestine, once the home of a great people, is now the abode of desolation. The 100 cities of ancient Asia Minor were buried by the ignorance and neglect of the science of agriculture as securely as Pompeii was by the lava of Vesuvius. It

has been estimated that the entire population of Europe could have been abundantly maintained by the products of the Mediterranean shore lands, which have thus been withdrawn from human use. There is now there a sterile area of 2,800,000 square miles which was once a very paradise of fertility. We have examples even in young America that should teach us a lesson. We might notice in many of the South-eastern States ancient plough-furrows seemingly drawn through the "primeval forest." These tracts were once vast and blooming cotton plantations until the land became exhausted. The prodigal lord would then abandon to recuperating nature the lands he had despoiled of wealth and would seek new tracts in the "inexhaustless West" to repeat his spoilage. But the West will not always, nor even long, be inexhaustless. Some other plan must be adopted. We must call science to the rescue.

These, then, are my reasons for higher education among farmers. And now fellow-farmers of Lobo, of Middlesex, of Ontario, as a parting request, let us carry on the enthusiasm and the new life inspired into our minds by these Institutes and these Professors from the Ontario Agricultural College, and raise our honest vocation above drudgery, slavery, and ignorance into the highest realms of intelligence, of science, and of dignity.

"In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle!
Be a hero in the strife."

By the errors of others the wise man corrects his own.

Sober second thoughts have done a great deal of good and a great deal of harm in the world. They have kept the evil disposed from yielding to temptation, and again they have kept the well disposed from following their hearty and generous impulses. Rarely is it the case that an impulse to speak, or to write to another in tenderness, in gratitude, in admiration or in trustful confidence is not safer and better than the conclusions of sober second thought on the subject.