

tion or ultimate usefulness; but I do say, that under a better system it might be greatly improved, and at no greater expense to the public. Under the present system, the competitors have no other view than the getting the premium or prize; it is looked upon more like a lottery, where their dollar gives them a chance of a pecuniary prize, than a Society where a fair competition of well directed industry and sound farming principles successfully carried out, will meet with an honorable reward. There are many good reasons for this anomaly, and the first is that the Committee is too much in the power of the expecting public, for unless they immediately gave up and distributed the moneys received, without reserve for future contingencies, and with the least possible delay, such a clamour would be raised against them, that they would not comfortably keep, or perhaps possibly keep their places, and their successors would be in a worse predicament.

The premiums offered are often forced upon them by the known possessions of some popular individual, rather than as an incentive to the production of more useful articles known to be wanting.

The Secretary should be named and appointed by the Committee, not by public election. A merchant might as well allow his clerks to be elected by his customers as the Secretary to an Agricultural Society be elected by the public.

Much expense is also incurred from the necessity of procuring judges not inhabiting the County, whereas many equally disinterested and competent persons might be found in the neighbourhood of the exhibition.

But the greatest error of all is the difficulty, if not the impossibility, of the Committees to establish Pattern Farms on the present system. Pattern Farms are really the only remedy to our present imperfect and almost ruinous practice. It is the only way of proving experimentally the advantages of the improved implements of husbandry; no explanation or drawing, however correct, will suffice, not even the model itself, the effect and result must be clearly made apparent, and that can only be done by the actual operation on a real field.

I fear that my letter is already too long. I have much more to say, but indeed I am not aware that all I have said has not been much more ably treated in your Journal, and that you

are tired of the repetition without effect; if so, you are at liberty to make any use, or no use, of this letter. It will, at any rate, have afforded me the pleasure of assuring you of my high respect, and admiration of your untiring labours, and that

I am, Sir,

Your most obedient humble servant,

TRIPTOLEMUS.

## ELEMENTS OF BOTANY,

### GENERAL ATTRIBUTES.

1. Plants are scarcely separable from animals by any absolute character; the simplest individuals of either Kingdom being often undistinguishable by our senses.

2. Animals are for the most part incapable of multiplying by mechanical or spontaneous division of their trunk, and are supported by nutritious matter, carried into their system from an internal bag or stomach.

3. Plants are for the most part congeries of individuals multiplying by spontaneous or artificial division of their trunk or axis, and supported by nutritious matter conveyed into their system by the absorption of their lower extremities or roots or by their outer surface.

4. Generally speaking, they are fixed to some substance from which they grow, are destitute of locomotion, are enabled to digest their food by the action of the light upon their skin, and form starch at some period of their lives. Animals, on the contrary, seem never to form starch.

5. Like the simplest animals, the simplest plants are vesicles, or vesicular threads, and the most complete plants may be regarded as indefinite multiples of such vesicles arranged in definite forms.

6. They are composed of tissue, out of which the elementary organs are constructed.

7. When first formed tissue consists of a substance called cellulose; its chemical nature is rapidly altered by the addition of lezotized and other matters, and especially by an increase in the relative proportion of carbon.

8. It is a hygrometrical substance, possessing adhesiveness, elasticity, extensibility, irritability, and vitality.

9. Its adhesiveness enables the elementary organs to grow together readily when in contact.

10. Its elasticity permits it to bend and recover, or to stretch and contract itself; the former a property essential to plants in consequence of their exposure to atmospheric disturbances, from which their want of locomotion prevents their escape; the latter demanded by the emptying and filling processes which are incessantly in action in the elementary organs, while growing.

11. Its extensibility enables it to enlarge as