

## THE ALPACA.

*Its Naturalisation in the British Isles considered as a National Benefit, and as an Object of immediate Utility to the Farmer and Manufacturer.*

By William Walton. Blackwood & Sons, Edinburgh.

For most of our cultivated plants, and indeed for many of our domestic animals also, we are indebted to other countries. With regard to the former, the history of their introduction is in many cases well established in detail; but it is so long since the latest of them, the Potato, the Turnip, or the Mangold Wurzel, or Carrot for instance, was first cultivated in our country, that farmers have fairly settled down into the belief that they must make the best of the subjects they have on hand, for that Nature has nothing further in her stores suited, in our climate, for the wants of man or beast. And with regard to the latter the introduction of the very latest dates so much farther back, that we must estimate the prejudice as stronger still which scouts at the idea of any further addition being made to our stock of domestic animals from the lists of other countries. Of course, in speaking of this universal prejudice, we allude simply to the generality of those who at present occupy and cultivate our soil, and who form their opinion probably without very well knowing the grounds upon which it rests.

There is every probability, notwithstanding the general notion to the contrary, that a useful addition will shortly be made to our stock of domestic animals. The Alpaca, from the experience of it which has been compiled from various quarters in this country by Mr Walton, really seems likely hereafter to play an important part in the stock-farming of the lilly districts of the kingdom. This animal is indigenous in the mountainous regions of Peru where two domesticated species of it occur. The one receiving the name of Llama is used as a beast of burden; the other—the Alpaca—to which we at present allude, is a wool-bearing animal, and of it large flocks were formerly possessed by the Incas, sovereigns in former days of that country, and by other wealthy inhabitants of it. The climate of the districts in which this animal flourishes is described by Mr Walton as follows—

"The woolly natives possess a hardness of constitution, and a peculiarity of structure, admirably well adapted to the nature of their birth-place—There, during half the year, snow and hail fall incessantly, whilst in the higher regions, as before noticed, nearly every night the thermometer falls below the freezing point, and the peaks, consequently, are constantly covered with an accumulation of ice. The wet season succeeds" &c.

On the applicability of the Alpaca to our soil and circumstances, we quote the following remarks:—

"The hardy nature and contented disposition of the Alpaca, cause it to adapt itself to almost any soil or situation, provided the heat is not oppressive, and the air pure. The best proof of its hardness is its power to endure cold, damp, hunger, and thirst, vicissitudes to which it is constantly exposed on its native mountains: while its gentle and docile qualities are evinced in its general habits of affection towards its keeper. No animal in the creation is less affected by the changes of climate and food, nor is there any one to be found more easily domesticated than this. It fares well while feeding below the snowy mantle which envelops the summits, and for several months in the year clothes the sides of the Andes. It ascends the rugged and rarely trodden mountain path with perfect safety, sometimes climbing the slippery crag in search of food, and at others instinctively seeking it on the heath, or in rocky dells shattered by the wintry storm, at the same time that, when descending, it habituates itself to the wet and dreary ranges on the lowlands, so long as it is not exposed to the intense rays of the sun.

"Many of our northern hills would try the constitution of any sheep, and yet there the weather is never so inclement or so variable as on the Cordilleras of Peru. With so many advantages, why then shall not the Alpaca have an opportunity of competing with the black-faced sheep, the only breed that can exist in those wild and inhospitable lands? Of the two, the stranger would fare best on scanty and scattered food, at the same time affording to the owner a far better remuneration."

The Alpaca wool is at present used largely in British manufactures. Mr Walton estimates the quantity hitherto consumed since its introduction in 1852 at 12,000,000 lbs. The price of it varies from 1s 8d to 2s 6d, per lb, and the average weight of the fleece may be put at 10 lbs. Were the animal fairly naturalised on some of our bleakest hill districts, such land would soon increase in value from the increased worth of its annual produce in Alpaca wool. And it appears from the experience of several gentlemen who have small flocks, that, when its habits shall be thoroughly understood, little difficulty will be experienced in doing so. The following is a statement by Mr Stirling, of Craigmarnet Place, Lennoxtown, Glasgow—a gentleman better qualified to speak on the subject than any one we could name—

"I can have no doubt that, when the subject is better understood, the animal itself better known, and a more expeditious method contrived to bring them to Britain, we shall have thousands of them. When known, their docility, their temperate habits, their hardness, and, I may add, their easy keep will ere long bring them into general notice. I can answer without the fear of being contradicted, that they will thrive and breed in Scotland, equal, if not superior to our native black-faced sheep."

To those who would laugh at the idea of bringing over here, and domesticating on our hills, a Peruvian camel or sheep—for the Alpaca has properties in common with both—we would point to Australia, a country which not many years ago possessed no quadruped but the kangaroo, and yet, notwithstanding its many peculiarities of climate, is now thickly peopled with our sheep and oxen. But the question must not be left to generalities of this kind—the experience of a few short years on the larger scale, which expected importations will enable, will determine it satisfactorily; and if, as in all probability will be the case, the Alpaca should become one of our domestic animals, the best thanks of the country will be due to Mr Walton for the persevering energy with which he has pressed the subject on public attention. His book is an exceedingly interesting and neatly got up little volume, and will, we doubt not, prove a useful publication.

**THE ALPACA.**—We recommend the foregoing remarks upon the Alpaca or Peruvian sheep, to the careful attention of our readers. It appears that the Alpaca does best in high lands and a cold climate, and it would doubtless do well in some portions of this country. The wool from this animal is highly prized for manufacturing purposes, and is extensively used in Britain. We therefore think it a subject worthy the attention of the Canadian farmer, and trust that some one of enterprise will take the necessary steps to introduce them. Would it not be a wise expenditure of money, for our agricultural societies, to give sufficient encouragement to this business to have it fairly tested?

From the American Farmer.

## MANURES.

A Prize Essay, by S. L. Dana.—Concluded.

## SECTION THIRTEENTH.

## Manures composed chiefly of Mould.

These are of vegetable or animal origin. And first, of animal mould. Here we shall find, that we come, perhaps, better prepared to understand this part of our subject, than either of the preceding classes. We have explained the principles which enable us to understand why it is that animal and vegetable substances produce, by decay, identical matters. The only difference consists in the quantity of these matters. Let me here, reader, call to your remembrance the facts we stated respecting the two classes of food, and the two classes of substances formed from that food by animals. A certain portion of that food contains none of that principle which forms ammonia. This portion of food makes fat. Another portion of food contains the substance which forms ammonia. This part of the food forms flesh and blood, and the other parts of the body, skin, hair, feathers, bristles, wool, horns, hoofs, nails and claws, thaws and sinews. Now, when a body dies and decays, the mould which it forms will be rich manure, or poor manure, just in proportion as it contains more or less of the substances formed out of that portion of food which furnishes flesh and blood. The fat, therefore, in animal mould, plays a very inferior part to that acted by the flesh and blood. In a word, as I wish to dismiss the fatty matters from our present consideration, I may do this, reader, by stating to you, all that you need know, that in decay, fat forms chiefly carbonic acid. If, therefore, you call to mind what we have said about the action of that, you will see how fat acts in manure. But the flesh and blood, and the substances formed from it, give precisely the same things as vegetables do when they decay, that is, water, mould, and salts. The great difference between the decay of animal and vegetable matters, is thus, that as the animal bodies are far richer in the substance, which forms ammonia, so they afford a richer source of manure. The animal body contains that element, in quantity enough, not only to fill the pores of its own mould, but also enough to impregnate a large quantity of mould from other sources. The vegetable body, on the contrary, contains scarcely enough ammonia to fill its own mould. Vegetables differ in the quantities of the elements of food, which can furnish flesh and blood, and hence these vegetables are best for manure, which furnish most ammonia. We have already remarked on the difference, in this respect, between, straws, grasses, and clover. But without going further into this comparison, which can have no other practical bearing, than to show you the immense difference in value, in animal and vegetable bodies, in forming manure, we may here resolve the subject into one great principle. The substance which forms flesh and blood, whether derived from plants or animals, alone forms ammonia during their decay, and the mould thence arising, is rich or poor manure, just in proportion as it contains the substance, fit to form flesh and blood. Starting from this principle, we find that animal substances, as flesh, fish, fowl, the body generally, including its various forms of covering, hair, wool, feathers, nails, hoofs, horns, claws, &c. afford, in the process of decay, about ten times more ammonia, than the straws and grasses usually entering into the compost heap. The animal bodies give more volatile alkali, than their mould can contain.

It is given off in such quantity that decay is rapidly hastened. All the signs of putrefaction, therefore, rapidly take place. The quantity of mould being small, nothing holds the volatile parts, they escape and are lost. Now common sense and practical foresight have stepped in here, from time immemorial, and taught mankind the necessity and the utility of preventing the waste of the volatile and most valuable parts of the decay-