

here, to acclimate them, fine woolled Merino sheep.

Finally, I think that, in a great number of rural [operations of the province, it would be a great profit in winter to keep a smaller number of horses or cattle, and to increase considerably the number of sheep which pay their consumption, in rich manure, mutton, tallow and specially in fleeces.

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Cattle at the Provincial Agricultural Exhibition.

Before we begin to study the breeds of cattle, exhibited at the Provincial Agricultural Exhibition, we think it useful to give our readers "*grosso modo*,"—the *why* of the characters we required either in the milking or fattening breeds.

We give this *why*, less to make science than to fix in the mind of the reader, the characters by which we almost infallibly know, an animal specially apt to produce milk or to produce meat.

To make a complete study, we should follow the food in all the transformations it undergoes in going through the digestive system. We should demonstrate, with the help of chemistry, that the composition of milk essentially differs from the composition of the animal tissues, and resembles to that of the vegetable principles; that the composition of butter resembles more to that of vegetable fat; that "caseum (cheese) itself, is but an azoted vegetable substance" which can be useful to the nutrition of organs only after a new transformation, and a more complete animalization, and this is so true, that we do not see it in the animal tissues,

but only in vegetables, from which it passes in the chyle first, in the blood and the teats afterwards. We should thus arrive to the fact that the most important principles of the milk have a more vegetable than animal composition. Then we should come to the conclusion that a large and powerful respiratory apparatus, which would better animalize the food, could but facilitate the assimilation to the profit of the muscles and to the prejudice of the production of milk.

This is the case in the fattening breeds; while in the milking breeds, the respiratory apparatus, being not sufficient for the complete animalization of a great quantity of materials, added to the blood by a large digestive system, powerful teats take them away from the blood in proportional quantity to these materials, to transform them in to milk.

It is not necessary that the materials which are to be expelled from the organism should be so much animalized as those who are to be fixed and incorporated. The milk needs not to be "flowing flesh" since before entering in the composition of the living tissues, it must undergo all the digestive, respiratory and secretory elaborations. In a word, if the breast is large, consequently the respiratory system powerful, the food will be easily assimilable and converted into meat. If the breast is narrow, the belly large, the teats will stop when passing, the food that the breast could not animalize, and convert them in to milk. The more the chest will be small and the belly wide, the more food will escape and serve to the secretion of milk. It is so much the case that the furnishers (milk-men) of Paris do not fear to buy cows which suffer from pulmonary disease, because, they say, the alteration of the lungs, when not too far advanced, far from diminishing the production of milk, increases it greatly.