

However, with Anattoine it is different, for this can be found quite pure; and I find it is the surest and best as well as the most economical of any.

From many tests and reports, I find that it costs from 8 cts. to 15 cts. to color 100 lbs. of cheese with the prepared Anatto extracts, purchased in jars or jugs or by the gallon.

This, in a factory of 400 cows, means an expense of from \$80.00 to \$150.00 per season, while with Anattoine, which may be prepared by any one according to the directions below given, the cost will be from \$25.00 to \$35.00. This will save from \$55.00 to \$115.00 per season in a large factory.

Anattoine costs about \$1.25 per pound in small lots; and one pound will make 4 gallons of excellent colouring at a cost of less than 40 cts per gallon.

One gallon will colour 1200 to 1500 pounds of cheese, or at the rate of  $2\frac{1}{2}$  to 3 cts. per hundred pounds.

The manner of preparing this color is as follows: Take 1 lb. Anattoine and put it in 2 gallons of pure, soft, cold water.

In another vessel put 2 lbs. of pure potash, 2 lbs. best sal soda,  $\frac{1}{2}$  lb. best saltpetre, and 1 lb. salt. Add 2 gallons of hot water. Stir both mixtures separately for 24 hours, and then mix all together, and stir frequently for 48 hours, when it must be put in jugs or jars, and set in a dark, cool place but not where it will freeze. From  $\frac{1}{2}$  oz. to 1 oz. will be sufficient for 10 lbs. of cheese.

When using, measure out the colour and add three times the amount of hot water before putting it into the milk. This colour will keep a long time, if these directions are followed.

If there should be any who are unable to obtain Anattoine, I will cheerfully get it for them, as cheaply as possible, if they send me their orders before the 20th of March.

J. M. JOCELYN, Stansted, Que.

#### VETERINARY DEPARTMENT.

Under the management of D. McEachran M. R. C. V. S.

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#### Wintering Stock.

In our last issue we endeavoured to show the necessity for comfortable housing especially with reference to heat and ventilation. We will now follow up the subject in some of its minor but not less practical details. Above all things, avoid over-crowding of young stock; where too large a number are kept together, some of them do not thrive, on the principal of "the survival of the fittest," the strong pushes the weak aside and deprives it of its share of food. Not only on this account, but overcrowding is objectionable from a sanitary point of view, each pair of lungs consumes its quota of oxygen, and where the requisite number of cubic inches of air are not allowed, impaired aeration of the blood is the result, and besides this the urine and faeces emit noxious odours, so that the animal in an over-crowded pen is exposed to those influences most likely to generate disease. It is of great importance, too, to provide for thorough ventilation in every stable and cow house, this is one of the defects too common in our farms buildings; ventilating shafts should be arranged so that a downward current of pure air and an upward current of heated and exhausted air will be in constant circulation in every building containing stock. As a rule, where we find an attempt made in this direction, the shafts are too small, and are usually single, they should never be less than from eighteen inches to three feet square, and should be divided into two, or better still, four compartments, this will ensure an upward and downward current, no matter from what quarter with the wind blows. The division should not come down flush with the ceiling; it should end about two feet from it: this will prevent a cold draught descending from it. The lower end should have a trap-door, swung on pivots, which can wholly or partially close the ventilator according to the weather. The upper end should open by a fanlight. Such a simple con-

trivance can be constructed by any of our readers, and will effectually prevent damp walls and dropping ceilings, which render a stable or cowhouse unhealthy. Thorough drainage is of even more importance. No stable or cowhouse can be healthy without good drains. Yet we seldom see good drainage in our farm buildings. It is of importance, too, to see that the building is sufficiently lighted: a dark building is very unhealthy for animals and they lose health and vigour, just as plants do when deprived of light. Besides, it is impossible to keep a dark stable as clean or comfortable as a well lighted one. The stalls in which they are kept should be sufficiently large to give them ample room to move about and get up and down comfortably, and allow whoever is attending them to get around them properly to feed and clean them. As a rule we find that stalls are made too narrow. Every horse-stall should be from five feet and a half to six feet clear; loose-boxes, eight and ten feet, or better still, ten and twelve feet. The pitch of the floor should not exceed one inch and a half in the ten feet; we sometimes see it three inches and a half; such a pitch must prove injurious, as it causes the weight to be thrown on the hind legs, when standing, and the viscera to gravitate backward when lying down; such diseases as spavin, ringbone, etc., are often traceable to undue weight thrown on weak parts from this cause. In the cow-stable, more especially, does this prove injurious. Pregnant animals, particularly, suffer from lying in a narrow stall with a steep pitch. The forcing backward of the abdominal contents often resulting seriously from protrusion of the genital organs.

Cattle often suffer during winter from becoming soiled by lying in their droppings, which drying and matting, form hard and uncomfortable incrustations on the hips. This can be obviated by having the stall raised three inches above the gutter, and of just such a length as when the animal stands back the length of her chain, the faeces will drop into the gutter, and if the feeding trough is placed low, on the floor in fact, the cow must step back to feed; in this way the hips will be kept clean. We observed in the stable of the Hon. Louis Beaubien, at his farm, Côte St. Catherine, a very commendable contrivance for keeping the animals clean and saving the manure, solid and liquid. It consists of a large gutter about two feet square running behind the row of cow-stalls, and continued right out to the manure pit, into which the solid manure is pushed, while the fluid percolates into a well or reservoir for the purpose, from which it is occasionally pumped on to the heap; the whole being under cover.

The gutter extends about two feet into each stall, the whole being covered by a flat iron grating, of a width only sufficient to allow the manure to drop through. By this means, the cleanliness and comfort of the cattle are secured, litter is economised, and the manure is saved. We might suggest as an improvement the throwing in of a few inches of dry earth each time the gutter is scraped out, which should be at least twice a day.

All animals, particularly horses and cattle, should have daily exercise, especially young growing stock. "As the sapling is bent so does it grow," so with animals; and if deprived of that exercise necessary to develop their joints and limbs, defects are engendered, which, in colts at least, render them unsaleable if not useless. The feet of colts require looking to frequently during winter; care should be taken not to allow them to grow too long as they lose their form, and act as levers on the tendons and joints, giving rise to sprains and injuries resulting in such affections as spavins, curbs, ringbones, and navicular disease. Want of exercise also causes swelling of the legs, in some cases, causing weakness of the lymphatics, from which they never thoroughly recover.

In our next issue we will notice some of the diseases incidental to badly wintered stock.