

## AGRICULTURAL.

### Care of Incoming Cows.

The profit of the dairy depends to no small extent upon the care of the cows preliminary to the beginning of a new milking period, says the Cultivator. The function of maternity, and the condition of the cow, with that of the calf as well, controls the condition and performance of the lactatory function. It is a prevalent idea among dairymen that a cow need only produce a calf, never mind how, or what kind of a calf, to become a milk producer; and that the milk production has no connection with the condition of the dam or the offspring, futher than its natural recurrence at the birth of a calf. Consequently the calf receives no thought or attention, and the cow is milked on until the supply becomes stopped, or it is not fit for use. Indeed, in many cases the cow is fed more liberally as the milk decreases in quantity, in the attempt to prevent this decrease and maintain the supply, without any thought of the results to the cow or the calf.

Now the growth of the calf in its uterine existence is an important point to consider, because it has a very intimate connection with the welfare of the dam. We cannot safely disturb the natural course of the animal functions without mischievously disturbing the health. The growth of the calf is not a separate and distinct affair from the maintenance of the uterine system of the cow. The cow and the calf are one, and prosper or suffer with each other. If the system of the cow is strained or deprived of the proper nutriment required for the growth of the calf, the whole generative apparatus suffers and is weakened, and the poor, weak calf is borne of a weak and impotent dam. The result is risk of trouble in calving or before it, prevalence of disease, and injury to the milking apparatus. So that when a cow is naturally decreasing the milk supply, efforts to stimulate are injurious; and it is equally injurious to permit a cow, naturally a copious milker, to keep up the flow of milk beyond a safe period before the appearance of the calf, and this safe period is not less than two months. We frequently hear of cows milking copiously up to the new calving—of milking so persistently that it is impossible to dry them off; but what is the result? These are the very cows which abort calves, or which perish of milk fever (parturient apoplexy) within two or three days after the birth of a calf; and these troubles so commonly incident to the period of calving prevail almost solely in those dairies where high feeding and copious and long-continued milk-production are the rule.

Now it is not profitable to breed and rear costly cows and destroy them in this way; nor is it profitable to injure a cow permanently for the sake of a few quarts of milk or a few pounds of butter late in the season, when the milking should be stopped to enable the cow to perform her maternal functions healthfully and safely. The treatment of the cow then from three to two months before calving is of the greatest importance to the dairyman. It is far better that a cow should be productive during the rest of the time than that she should milk a few weeks longer at this time. And the supposed gain during these few weeks is made at the expense of the cow during the nine or ten months to come. To dry up the milk, as it is called, a sufficient time before calving is then imperative, no matter how troublesome it may be. It is scarcely possible that any cow would be so prolific of milk at this time, but that dry feeding and partial milking would stop the flow. Indeed, wholly and suddenly to stop milking is not dangerous with the majority of cows giving no more than three quarts at a milking. The production of milk to a very large extent is known to be due to the milking.

Milking excites the lactal glands, and causes the glandular substance to break down and form milk. This is as well known as any other matter of physiology that cannot be proved by actual visible evidence; so that to stop milking at once reduces the product of milk, while dry feeding—nothing more than hay alone—will aid considerably in this desired result. It is not safe to stop milking suddenly with all cows. Some copious and persistent milkers may be dried by putting off the morning milking two or three hours for a few days, and then still further lengthening this time until the evening milk is so reduced that it may be suspended. By leaving half the milk in the udder, most of it will be absorbed, and in a few days the product of milk may be so reduced that the milking may be wholly stopped. A cow in good condition at this time needs no other food but good hay, and timothy hay is better than clover. To a large extent the calf must subsist on the dam at this time, and it is better that it should be so. It is the course of nature, and gradually reduces the amount of blood in the cow's system, and prepares it for the sudden excitement of the circulation when the calf is separated and fully one-tenth of the circulatory system is suddenly cut off. Thus the danger of milk fever is almost wholly removed; what little remains will be due to inherited tendency, and may be overcome by the simplest precautions, such as keeping the cow quiet in a separate stall for a few days before the calf appears, and avoiding all nervous excitement when the event occurs. Moreover, there is less danger of accidents or abnormal circumstances at the birth, and the quite common inconveniences which occur in dairy herds, as retention of the placenta, garget, &c., are avoided.

### When to Sow Clover Seed.

It is always safest to get clover seed sown early, that is to say as early in April as possible. A good farmer who generally sows clover seed on winter wheat says that he has made a practice of sowing after a light snow, taking a time when the air is still and the damp snow lies evenly over the ground. As the seed lies on the surface it is easy to see how they are being distributed, and how far the sower's throw carries. But if the seed is sown in the morning it does not long remain on the surface. The dark seed holds the heat of the sun and drops down through the snow, reaching the ground below the bulk of snow melts. When the snow goes off there is usually a little film of soil left over the seed, covering it better than any implement could do. It may be several weeks before the weather is warm enough for the clover seed to grow, but it is gradually swelling under its film of soil, and when ready to germinate it can get a good rooting and grow without the danger of drying up and that it would have done later and germinating only on a hard surface. Next to this method of early sowing, the next best plan is to wait until the

winter grain can be harrowed and a mellow seed bed made for the clover. We have chiefly practised this last method for the sake of the benefit to the grain crop and never failed of a good catch. The harrowing is especially beneficial, both for grain and clover seed, if the surface has been top dressed during the winter with a little fine manure. Every particle of manure as it is moved is doubled in efficiency, and both soil and manure are so mixed that the clover seed is furnished the best possible conditions in which to grow.

### Wonders From Rocky Islands.

The rocky islands of Jersey and Guernsey are perhaps the highest types of culture at the present day. Jersey farmers make \$300 an acre yearly from early potatoes for the London market; they have more than one cow to each acre of meadow in grass, and average \$250 to each acre of the island. Guernsey, with thirteen hundred souls to each square mile, and more rock than Jersey, has developed greenhouse culture. The raising of hothouse grapes was started thirty years ago by a few men, and now the island exports yearly fifty tons of grapes, which bring \$215,000 at the low price of eighteen cents a pound in winter.

Kitchen gardens under glass are now the rule. Three fourths of an acre covered with glass and heated for three months in the spring yields eight tons of tomatoes and two hundred pounds of beans as a first crop in April and May, to be followed by two crops more during the summer and autumn. One gardener is employed, with two assistants; a small amount of coke is consumed with a dollar's worth of gas a month for a small watering engine.

Prince Krapotkin writes that he saw a quarter mile of green peas under glass in April which had already yielded 3,200 pounds of excellent peas and were full, as if untouched, and he also saw potatoes dug from the ground in April at the rate of five bushels to twenty-one feet square of ground. The immense vineries of Mr. Bashford, in Jersey, cover thirteen acres; their cost, excellently built, was \$2.34 a square yard. The whole work is done by thirty-six men, and 1,000 loads of coke and coal heat the whole for a season.

A well-known writer on agriculture states that "the money return from these thirteen acres of glass greatly exceeds those of an English farm of 1,300 acres."

The crops are not counted by bushels but by tons. Besides this the Channel Isles have simple shelters of thin planks and glass, which only cost ten cents per square foot, and nevertheless allow of most surprising crops for sale by the end of April.

### Growing an Orchard on Waste Places.

Having about four acres of waste land, that puzzled me what use to make of it, it was too stony to even try to plow it, and covered with all kind of brush and some trees, I did not want it in that state of nature for two reasons: first, it was no profit; second, it hurt the looks of my farm. So the idea struck me that I would improve the looks of the unsightly ridge, I would clear it off and get clover to grow on it, but what good would clover do when it was too stony to even think of mowing it with the scythe, so I balked on the clover part. Well, I will plant it in apple orchard. All right. So I went head with my orchard project: First, to get the holes dug was the next obstacle, so with pick, shovel and crowbar, we dug the holes for the apple tree (I use the word because my boys helped me). We dug holes the best we could. It was a stony job, I tell you. The planting would have been easy enough if there had been dirt to fill in around the trees and fill up the holes, for all we took out was more stone than dirt. So we had to do a great deal of borrowing dirt, but we planted the four acres, all the same, in Ben Davis apple trees.

After plating we hauled straw that had been tramped under foot by the cattle (this was in the spring) and put it around the trees. It answered as a mulcher and manure. I just put it around the trees about three or four inches thick and two feet around. The summer was a dry one, but the trees grew right along, contrary to what my neighbors predicted, that they would die in August. There was not one tree dead and there is none dead yet, and that has been five years ago. In the fall we cultivated around the trees with pick and mattock, the straw had killed the grass and made the soil loose and mellow. Remember, we had to sprout and haul the sprouts down, so every spring we hauled more straw and put around the trees, still getting further away from the tree, so by this time we are half way with our work of covering the ground. The trees grow faster, look thrifter, bear better and have nicer apples than any young orchard in the district. I am also growing an orchard on smooth land, with the same care and attention as the stony one, but the stony one seems to be taking the lead so far, and I think from my experience in the two kinds of land in orcharding that the stony land is just the kind for Ben Davis apple trees. This much I do know, that where I had a waste four acres I have a nice, thrifty young orchard.—[Henry Bowman.]

### Canadian Cheese and Butter at Jamaica.

The cheese and butter which was sent from Canada, under the direction of Prof. Robertson, Dominion dairy commissioner, has been creating considerable stir at the Jamaica Exhibition. The honorary commissioner for the exhibition, Mr. Adam Brown, had arranged for a gala occasion, when his Excellency, the Governor of Jamaica, was present. Favorable comment was made on all sides at the excellent quality of the dairy products which were sent to represent the class of goods which Canada exports. For cheese the first place was awarded to the exhibit of Messrs. Duckett, Hodge & Co. of Montreal; the second place to that of L. C. Archibald, Antigonish, N. S.; the third to the display made by Messrs. Hodgson Bros., Montreal, and the fourth to the exhibit of Mr. F. W. Fearman, Hamilton, Ont. For butter, the first award went to Mr. Isaac Wenger, Ayrton, Ont.; the second was carried off by the exhibit of the School of Agriculture at L'Assomption, Que.; the third and fourth went to the shipments from Messrs. Bell, Simpson & Co., Montreal Que. Beside these, the dairy products exhibited by Messrs. A. A. Ayer & Co. and Messrs. Kirkpatrick & Cookson, both of Montreal, called forth very favorable comment, redounding alike to the excellent quality of the goods and the enterprise of Canadian merchants.

## MONARCHS OF THE FOREST.

### Sir Samuel Baker Tells of Wild Animals in Tropical Countries.

There is no man living so well qualified to write about wild animals from personal observation as is Sir Samuel Baker. For nearly half a century he has been an explorer in Africa and Asia as well as in the least known parts of America and Europe, and he has never missed an opportunity of hunting "big game." In the book which he has recently published in London under the title of "Wild Beasts and Their Ways" he confines himself to recounting what he has actually seen, but the range of the experience includes such interesting members of the animal kingdom as the elephant, the lion, the tiger, the leopard, the rhinoceros, the hippopotamus and the crocodile.

In Sir Samuel Baker's opinion the elephant is underrated by most naturalists, both as regards intelligence and character. He can be educated to perform certain acts, when specially ordered, but, unlike the dog, he never volunteers his services. The author of this book never saw an elephant who would spontaneously interfere to save his master from attack. He admits, nevertheless, that an elephant's power of learning is extraordinary, and that his memory is remarkable. After seven months' absence in England, an elephant, that Sir Samuel had the use of on a previous visit to India, recognized him at once on his return. It is not through fear that an elephant serves man. He is by nature an excessively timid animal and acutely sensitive to pain. Experience has shown it to be impossible to direct the movement of an elephant by simple kindness. He must know you to possess the power of inflicting punishment. In one particular the elephant is superior to most other animals—namely, in its freedom from any unpleasant odor. Its skin is sweet, and the head retains no smell after caressing the trunk or any other portion of the body. Sir Samuel has frequently encamped where fifty or sixty elephants would be kept for several days within 100 yards of his tent. Still there was no offensive scent.

With regard to the lion, also, Sir Samuel Baker's conclusions differ decidedly from the notions handed down in books and based for the most part on untrustworthy evidence. It is true that he credits the lion with the traditional dignity of appearance, and holds that this is not altogether delusive, but corresponds to a certain nobility of character, the lion being much more reckless than the tiger in exposing himself to attack. He has no doubt that a lion would, weigh more than a tiger of the same length. In his opinion, however, the former animal is much less ferocious and formidable than the latter. The natives of Central Africa have, it seems, no fear of the lion when he is undisturbed by hunters, though, of course, when wounded and standing at bay he is redoubtable enough. On several occasions Sir Samuel himself has seen lions, close to him when he had no opportunity of shooting, and they have invariably passed on without the slightest signs of hostile feeling. He evidently does not believe the stories (so frequent in books of travel) about night attacks by lions on the oxen belonging to wagons. In nine years' experience of camp life in Africa, both equatorial and as far as fourteen degrees north of the equator, Sir Samuel had never even heard of any actual depredation committed by lions upon a camp or upon a night's bivouac. He pronounces equally apocryphal the tales of lions jumping fences with full-grown bullocks in their grip. They may burst through fences under such circumstances, but not jump them. It is, Sir Samuel assures us, an impossibility for a lion to carry a full-grown ox. All it can do is to partially lift the forequarters of the victim and drag the carcass along the ground. We find two other interesting details in the observations of this veteran sportsman. The lion and tiger, when springing on its enemy, does not strike a crushing blow, but merely seizes with its claws. The lion, on the other hand, strikes with such terrific force that many a man has been killed outright as if hit by a trip hammer. As to the thorn alleged to exist in the extreme end of a lion's tail, Sir Samuel says that this phenomenon, though often disputed, is a fact. The so-called thorn is a sharp, horny point, which, although only a quarter of an inch in length and concealed by a tuft of black hair, will, if pressed by the finger, make itself felt unmistakably.

The size of the tiger is underrated by those who accept the tales of travelers, or who judge from the length of the skins sold in the European or American market. The average weight of the bengal tiger, according to Sir Samuel Baker, is from 350 to 400 pounds. It is not impossible that the weight may sometimes reach 550 pounds, but the author of this book has never seen so heavy an animal. When the animal is fairly measured without stretching, the average length from point of nose to tip of tail is 9 feet 6 inches. This is seldom exceeded by more than a few inches. One tiger, when measured by Sir Samuel, proved to be 9 feet 7 inches long; but the hide, when cured, was 11 feet 4 inches in length. The strength of the tiger is also exaggerated in the popular conception. Thus it is often asserted that this animal can lift and carry off a cow simply through the power of its jaws and neck. This notion is pronounced preposterous. Extremely small as are the cattle of India, their height exceeds that of the tiger, and, therefore, a cow's body must drag on the ground. As the weight of an ordinary native cow is just about that of the ordinary tiger (350 to 400 pounds), the latter can, of course, drag its own weight by lifting its victim's body partially in its mouth and thus lessening the friction on the surface of the soil. It is a mistake to suppose that any tiger (except the so-called man-eater) attacks man with the intention of eating him, as a natural prey. The greater number of accidents are occasioned by tigers which have no idea of making a meal of their victims, and which, as a matter of fact, leave unaten the men that they have killed. They are usually prompted by the instinct of self-defense. Even the man-eater, which is usually an old and cowardly tiger, or more commonly tigris, attacks men not so much because of any acquired preference for human flesh, as because it is easier to kill a native villager than to hunt for the scarce jungle game. The difficulty experienced in killing a man-eater is due, not to any superiority of courage over other tigers, but, on the contrary, to its exceptional cunning and caution. It is a sneak thief.

Of the chapter devoted by Sir Samuel to the various species of leopards, by far the most interesting sections relate to the cheetah, or hunting leopard, which in India and

Persia has from time immemorial been tamed and trained for the purpose of hunting deer and antelopes. This animal is entirely different from other leopards, having long legs, a light body, a long neck, a small head, and large and piercing eyes. The cheetah is generally admitted to be the fastest animal in the world, being able to overtake, on open ground, the black-buck, which surpasses in speed the highest-bred English greyhound. It may be kept about a house with comparative safety, as it seldom attacks domestic animals, but confines its attention to the beasts of plain and forest. The domesticated cheetahs that Sir Samuel has seen were as gentle as dogs. When game is expected, therefore, this animal is conveyed to the scene of the hunt in a cart, seated on the outside of his cage beside his master, who has his arm around him. He is blinded by a hood, like a falcon, and sits upright like a dog, waiting for his eyes to be uncovered. After a successful hunt the cheetah is allowed to lap a quantity of fresh blood from a wooden ladle. This ladle, consequently, has for him the same attraction as a "lure" for a falcon or a sieve of oats for a horse. By showing it to him you can recover the cheetah when he is disobedient to a call.

There is a marked difference between the Indian rhinoceros, the "unicorn" of the ancients, which has but one horn (less, on the average, than eight inches long), and the African rhinoceros, that has two horns, of which the anterior protuberance is very long and straight. The Ketloa, or black rhinoceros, which inhabits the country east of the White Nile, from Abyssinia to near the equator, is pronounced by Sir Samuel Baker the most ferocious of known animals. It will attack either man or beast without the slightest provocation. The longest anterior horn belonging to any of the black rhinoceros shot by Sir Samuel himself measured twenty-three inches. The speed and the bottom exhibited by this animal seem remarkable when its bulk is considered. The author of this book has hunted in company with Arabs, and although their horses would go their best for at least two miles, they would be unable to overtake the rhinoceros before reaching an impenetrable jungle. There is considerable danger in shooting this animal, owing to the difficulty of stopping his charge. His forehead is impenetrable, and so tough and thick is his skin that a specially hardened bullet is preferred to one of pure lead. It is said that a rhinoceros can kill an elephant, and Sir Samuel deems this highly probable if the former get an opportunity of striking the latter in the belly or the flank. Otherwise, the African bull elephant would win in such an encounter by reason of its superior weight and strength, and of the length and power of its tusks.

Next to the elephant, the hugest beast in point of bulk and weight is the hippopotamus. Of this animal Sir Samuel Baker has seen hundreds of specimens on the White Nile. One that he measured was 14 feet 3 inches long from snout to tip of tail. The crocodile never ventures to attack the hippopotamus, which, for its part, disdains to attack the crocodile. Although, like the rhinoceros, this monarch of mid-African rivers is not carnivorous, it is

### VERY FORMIDABLE TO MAN,

being easily provoked and assailing the object of its resentment with reckless fury. It can upset the largest boat, and in one instance perforated with its tusks the iron bottom of Sir Samuel's steamer, causing a dangerous leak. The flesh of the hippopotamus is always palatable, and when the animal is young, it is delicious. The skin makes excellent turtle soup. The tusks were formerly more valuable than those of the elephant, being in request by dentists because they never turn yellow. At the beginning of this century the price of hippopotamus ivory was \$6.25 per pound. Since the American invention of porcelain enamel for artificial teeth it is no longer sought for, and the value of the animal depends at present on the hide and the fat. The latter resembles lard, and the former is used for whips. A hippopotamus differs from most aquatic animals in this particular, that, instead of diving head first, it sinks backward and disappears by throwing the nose upward. There is also a marked difference between this beast and the crocodiles as regards the power of remaining under water. The former, notwithstanding its enormous lungs, must come up to breathe in ten minutes at the longest, whereas the crocodile can stay beneath the surface for almost any length of time. The crocodile has the power of living through the hot season, in a torpid state, buried in the mud, which dries and hardens above him. When the mud is softened in the rainy season the animal resumes its activity. It seems that crocodiles measuring twenty-two feet in length have frequently been killed. There is no doubt that one of these could swallow an ordinary human being. A large specimen having been killed and cut open in Ceylon, the body of a native was found in its stomach. We may note, finally, that whatever may have been true at the beginning of this century, the tough scales of the crocodile are no longer bullet-proof. A hardened, solid bullet, propelled by six drams of powder, will drive through a crocodile as though its hide were made of paper.

### French-Canadians for Manitoba.

The pioneer colony of French Canadian farmers, which will be located at Stony Plain, about 16 miles east of Edmonton, N. W. T., left Montreal on Monday evening by the regular train for Vancouver, and were joined at Carleton Junction by a large contingent from Ontario, who are likewise to be located at different points in the great North-west. The colonists from Quebec number 160, and have been induced to settle in the North-west by Rev. Mr. Morin, who has persuaded hundreds of people in Joliette, Montcalm, Chambly and St. Jean Baptiste to take up land in our own Canadian Dominion rather than become citizens of the neighboring republic. It appears that the Metis of the locality have upon the approach of the whites moved away to lake Labiche, 200 miles to the north of Edmonton, and having sold their cows to Father Morin the same will be placed at the disposition of the new-comers at a nominal rate. The pioneers will leave the Canadian Pacific at Calgary, proceed thence by rail to Red Deer, where carriages will take the immigrants to their new homes. The place has been named in advance St. Jean Baptiste de la Saskatchewan, after the reverend missionary's old parish in the province of Quebec. Rev. Mr. Morin will return in a short time and organize a second party of French Canadians, who are fast coming to see the wonderful possibilities of Canada's magnificent western heritage.

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