

this snow without becoming used up, and it is hard to put a horse through it for more than eight or ten miles a day. The cattle are being taken out in some cases by using snowplows. Even where considerable feed has been put up the feeding has had to be continued so long that supplies are exhausted, and cattle that have been fed for any considerable time refuse to get out and rustle afterwards.

The stress of weather will affect the increase, as well as stock at present on the range. Cows that have been exposed will be weaker than usual; the calves will come weaker and also earlier, and will be apt to strike worse weather by coming earlier, and both cow and calf will suffer. The large proportion of dogie cattle on the range, from the large importation of this class of stock within the past two or three years, will not tend to reduce the proportion of losses. The losses will not reach any very serious proportions, but on the whole the cattle will suffer from the March weather. J. McCAIG.

Milk Fever Prevention.

In support of the theory recently presented in these columns that a probable cause of so-called milk fever, from which so many valuable cows have died, is the common and unnatural practice of milking the udder out clean immediately after calving, we note a letter in the Jersey Bulletin, by Mr. Geo. F. Weston, Supt. of Biltmore Farms and Jersey herd, in which he says that on a visit to the Island of Jersey, he was surprised to find that several of the leading owners of deep milking cows had ceased to fear milk fever, and the secret was that they had ceased to milk the cows out clean for the first three days after calving. Mr. Weston says: "When this treatment was first mentioned to me on the Island, there came before me like a flash recollections of a large number of cases in which the death of some favorite or large milking cow had been reported, attended with the explanation, 'We milked her out clean. In fact, there were times when we have done the same thing here, and I believe every breeder has done so. It now begins to look as if this was about the worst thing we could have done.'"

Dr. Wheeler, Veterinarian for Biltmore Farms, has been experimenting along the lines of this theory, and he writes that since November 1st, 1902, the system has been tried on thirty cows, fourteen of which are among the heaviest milkers in the herd, no other measures having been used, not even a pound of salts being administered, and not a single case of milk fever has occurred, nor a sign of it, which is unprecedented in the herd. Only four cows have manifested udder derangement under this treatment, three of which had had udder troubles after previous calvings, and only one, not a serious case, developed after the last calving, which might have developed anyhow. "The modus operandi consists simply in milking from two to three pounds every six hours after calving, for the first three days, or about one gallon to a gallon and a half in twenty-four hours. After the third day, may milk the cow clean. In other words, ease the udder in the same manner the calf would, only drawing the milk equally from each quarter, which the calf would not necessarily do."

Dr. Wheeler does not claim that these facts demonstrate the entire reliability of the treatment, but considers it most encouraging, and desires that others will give it a fair trial and report. The indications seem to point strongly to the wisdom of getting back to nature in this field.

Combating Animal Diseases.

Under authority of the act passed by the U. S. Congress last month, giving autocratic power to the Secretary of Agriculture in combating contagious diseases of live stock, Secretary Wilson has issued new regulations which are thus condensed:

All persons owning, managing or transporting animals, are required to exercise reasonable diligence to ascertain that the animals are not affected with any contagious or infectious disease, and have not been exposed to contagion by contact with other affected animals, or by being in pens, premises, cars or other vehicles contaminated by diseased animals, before offering them for transportation or introducing them into public stock-yards, public highways, or lines of interstate traffic. All persons having charge of affected animals, or those exposed to contagion, are required to keep them confined, and not to permit other animals to come in contact with them. Public stock-yards and feeding stations, alleys and pens, when contaminated by the presence of animals affected with or exposed to contagious or infectious disease, must be cleaned and disinfected in the manner required by the Secretary of Agriculture. Whenever a contagious or infectious disease exists the Secretary of Agriculture will quarantine the section of the country where the diseases are prevalent, and no animal can be removed until he gives authority. When it becomes necessary to slaughter animals, the owner

will be compensated after the value has been ascertained. Violations of the regulations are made punishable by a fine of not less than \$100 nor more than \$1,000, or by imprisonment of not more than one year, or by both fine and imprisonment.

Range Steer Experiment.

A special letter to the "Farmer's Advocate" from Guelph, states that little change in general appearance is to be seen in the steers from the Northwest Territory that are being experimented with. Of the nine which are being fed at the Agricultural College, five are in one bunch, and are now receiving each day 120 pounds turnips, 20 pounds chop and 70 pounds hay, while the other four get 90 pounds turnips, 16 pounds meal and 55 pounds hay.

Of the ten being fed at Major Hoods', five are tied, but two of them do not appear to enjoy such close confinement. From all present appearances, it probably will be the last of May or June before both lots will be fit for sale.

What Should be Taught at the Present-day Veterinary College?

The above question brings to a focus the whole question of veterinary education, because whatever the answer may be, it will undoubtedly throw light on the minimum of general preliminary education which the intending veterinary student should possess, and also the shortest time in which it is possible for any man to acquire a thorough professional education.

FOR THE ADEQUATE PROTECTION OF



THOROUGHBRED MARE AND FOAL.
Flitters by Galopion, winner of the Derby, and foal by Martagon.
OWNED BY THE EARL OF CREWE.

THE PUBLIC, THE MINIMUM OF PRELIMINARY EDUCATION AND LENGTH OF TIME OF PROFESSIONAL STUDY IN A VETERINARY COLLEGE SHOULD BE PRESCRIBED BY LAW! It is insisted upon in Great Britain, Manitoba, Quebec, and the great stock-raising States to the South; and it is incumbent on British Columbia, the Northwest Territories, and Ontario, to at once pass a similar law in order to avoid being the dumping-ground for a class of veterinarians possessing an inferior grade of professional education.

In passing, the question might be asked of the University of Toronto: What does affiliation with that institution mean in regard to veterinary education? Has not this great Provincial University been derelict in its duty, yes, prostituted itself, by lending its name and sanction to the antithesis of progress in professional education? What has the Chancellor and the other high officials of the University to say in extenuation of their course in pandering to the cupidity of the individual, to the damage of the entire profession?

Having passed the high school entrance examination of Ontario, or a standing or certificate equal to it, should be the minimum general education possessed before any person be allowed to enter the veterinary college. This standard is not at all high, and if a second-class certificate, or its equivalent, were demanded, the advantage would be all on the side of the intending student; he might not think so at the beginning, but would before he was through his professional course. The shortest time in which it should be possible for any matriculant to obtain a diploma,

and the right to practice, should be three collegiate years, each, at least, of six months' actual attendance at college by the student. I might here quote from the calendar of one of the leading U. S. Veterinary Colleges: "It is possible to earn money while attending college, but this is not advisable, as the time at best is very short.....!" and the course at that college is a three-year one!

Unless the two requirements, preliminary education necessary and length of professional study essential, are insisted upon, no up-to-date course can be mapped out that will endow a man with sufficient training to differentiate him from the diploma-holding quack. The insistence on the above requirements would not lessen the number of entrants into the profession, but it would mean that a high grade of professional men would be turned out, and as a result more profitable service be rendered to the fee-paying public.

At the outset it may be stated that the value (?) of the so-called veterinary correspondence diploma will not be discussed, beyond this statement, that only the ignorant, excited by cupidity, or those who have been misguided, will indulge in the expensive attempt to take a short cut to a profession; the uselessness of such credentials will be self-evident as the course to be mapped out here is studied, and from the fact that they have no recognized status. Similar to the agricultural, medical, legal, dental, engineering, and other professions, theory and class lectures, or studying of text-books, are insufficient to qualify a person for work in those professions; practice in the field, the hospital, the courts, the laboratory and the workshop is absolutely indispensable; in that great trinity of senses, the eye and the hand must have equal place with the ear in the work of educating the future practitioner. Unless this is done, the student will not be a success, cannot make a living, or rightfully earn the fees which he may receive.

In a three-year course, the disposal of the vacation periods between the three sessions will engage the intending student's attention. When possible, both should be spent in practice with an experienced veterinarian, if general practice is to engage the attention of the student; if he is to be an investigator, one of the vacations should be spent in a first-class bacteriological laboratory. The city student would do well to spend his first vacation on a good stock farm, and thus become familiar with animals in health; the second being spent in practice as mentioned above. The veterinary college of today has several roles to fill—to educate the man for general practice, for meat and milk inspection, and for the investigation of animal diseases, especially those communicable to man. To accomplish this great work, the raw material, in the form of the student, must be up to a certain standard, which has already been touched upon. Thoroughness in the teaching of the fundamentals is the foundation of success for the student and practitioner to be, whose interests the veterinary college is supposed to look after. The first year's work should include anatomy and physiology, histology, chemistry, materia medica and pharmacy, dentistry and horseshoeing. The laboratory should, in comparison with the lecture-room, be allotted at least, of the student's time, in the proportion of two to one. In anatomy, the great essential is dissection and quizzes on the work done, and on the acquisition of a good knowledge of anatomy depends the practitioner's success; physiology, or the workings of the animal body, must back up the construction (anatomy) of the same. Histology, or microscopic anatomy, is absolutely essential also, especially to the future investigator and meat inspector; laboratory instruction in this branch must be unstintingly given; without it, it is impossible for any person to become a pathologist. Chemistry embraces a wide field for the veterinary student, who needs to be possessed of considerable knowledge of this branch to avoid incompatibles in prescribing; to know the action of the body fluids, and to be able to perform urine analysis. Materia medica and pharmacy will include the study of drugs from both mineral, vegetable and the animal world, and also the proper methods of prescribing and dispensing those drugs. Horseshoeing explains itself: an elementary knowledge of the principles underlying the art are essential. Dentistry should also be taught the student, as it is now well known that horses especially are much sub-