

Muck.

The amount of benefit that may be derived from the application of muck to the land has often been discussed. The principal point at issue is whether it will pay to apply it directly in its raw state.

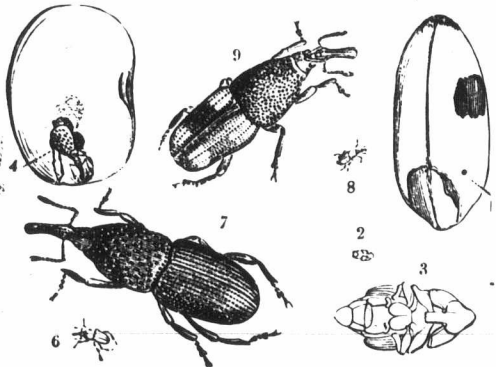
In answer to this question Prof. Craig says that "Muck is chiefly valuable for its nitrogen contained in the organic matter, or elements of semi-decomposed plants. Under favorable circumstances this nitrogen is available as food for farm crops, but, in addition to its value as a nitrogenous food, its mechanical effect is beneficial to most soils by improving their tilth and texture. A soil which is too heavy may be made light and more porous by the application of muck. Muck without fermentation does not readily give up its nitrogen to growing plants, and if applied to a soil without fermenting the immediate result will not be very apparent or marked. Nothing will be lost by applying it direct to the soil without composting, but, as already stated, the returns will be much slower than if the elements of plant food in it were fed by the chemical action which takes place during the process of fermentation. Very small results might be expected the first year from an application of muck which had been unfermented or uncomposted."

ENTOMOLOGY.

Granary Weevils.

BY JAMES FLETCHER, DOMINION ENTOMOLOGIST.

A good deal of consternation was felt lately at the World's Columbian Exposition, at Chicago, when it became known that nearly all the exposed grain, including the ornaments and decorations in the different courts of the Agricultural Building, was infested by injurious insects. An order was issued by the Superintendent of the Agricultural Department forbidding the distribution of any grain from those courts, even when brought in from outside for that express purpose. Being in Chicago at the time, I made a careful examination of the agricultural exhibits and found that the injury in the Canadian section was due almost entirely to two insects, the common Rice Weevil, *Calandra*



oryzae, (Fig. 8, where the insect is shown natural size, and 9, where it is shown enlarged), and the "Fly Weevil," better known as the Angoumois Grain Moth, *Gelechia cerealella*, a small moth at first sight closely resembling the too well known Carpet Moth. With the Rice Weevil were also found a few specimens of the Granary Weevil, *Calandra granaria*, (Fig. 6, 7).

The important question for Canadian farmers, and concerning which I was consulted by the Editor of the FARMER'S ADVOCATE, was, of course, whether there was any danger of introducing into Canada any new pests which would afterwards give trouble either in the field or in the granary. In my opinion, Canadian farmers need have no anxiety on this score; for both of these pests have already from time to time been imported from the south with various kinds of grain, but have failed to propagate and become established. This is due to the fact that they are tropical insects, which, although they are very injurious in the Southern States, cannot exist for any length of time in our climate.

The Granary Weevils are small brown beetles, a little more than one-eighth of an inch in length, which lay their eggs in holes which they bore by means of a slender beak in the dry grain. When young grubs hatch, they complete their growth and turn to beetles again inside the grain where the egg was laid. By this time they have eaten out all the interior of the kernel. The beetles then emerge and continue the work of destruction. When grain is kept in store for a long time, this injury may be considerable in hot climates; but in Canada the cold of our winters stops their development and destroys the beetles.

The "Fly Weevil" has never developed in Canada even to the same extent as the true weevils, although occasional instances of its occurrence have been brought to my notice. In the Southern States, where it is very abundant, the moths fly from the granaries and lay their eggs upon the ripe grain in the fields; the eggs or young caterpillars are thus carried back again into the granary, and frequently are the cause of much loss. This never takes place in Canada.

Remedy.—Should grain at any time be found to be infested by these insects, often repeated experiment has shown that the insects can be easily and cheaply destroyed by treating it with bisulphide of carbon, in the same way that peas are now regularly treated to free them from the Pea Weevil.

A full account of the Granary Weevil's life history and the details of treatment, can be found in the Annual Report of the Experimental Farms for 1889.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Veterinary.

JOHN L. SALKELD, Dongola, Man.:—"Would you kindly inform me if the flesh of a beast with 'lumpy jaw' is fit for feed?"

According to the latest reports of European and American scientists, the flesh of animals suffering from actinomycosis is fit food for man or beast, providing it has not been in connection with the diseased part, and the animal was in good condition and giving no signs of constitutional disturbance. See April 20th issue, page 152.

SUBSCRIBER, Meadow Lea:—"I have a six-year-old horse that took sick about the first week of August, his legs swelled and stiffened up, and he dragged them. Did not get off his feed entirely. He seemed to recover, but is now worse again, loses flesh very fast when attacked, and is now very thin."

The disease is probably of a rheumatic type. After discharging the horse by feeding exclusively on bran mash for sixteen hours, give a mild purgative consisting of one pint of raw linseed oil, and one ounce of turpentine. Continue the bran mash diet until the physic has ceased to operate. After this, give morning and evening for ten days: Iodide of potassium, one drachm; and bicarbonate of potassium, two drachms. In the morning the powder may be given in a moderate feed of oats, but at night it should be given in a bran mash, made by boiling a teacupful of flaxseed in sufficient water to scald four quarts of bran. Rub the whole surface of the legs and back two or three times a week with the following liniment:—Tincture of camphor and methylated spirits, of each six ounces; fluid extract of belladonna, two ounces; make up with water to one and a-half pints. Hand rub and bandage the legs twice a day. Keep body warm.

EVANDALE:—"One of my cows lately calved ten days past the regular forty weeks. Previous to going dry, hard lumps came on the udder, one teat becoming raw and very difficult to milk. The udder increased in size as calving time approached, and finally I tried to milk her, but could get no milk; upon calving I allowed the calf to suck, thinking it would bring down her milk, but still could get no milk. I kept her on dry feed, bathed the udder with warm water and hand-rubbed it; at last I had to take the calf off and feed it old milk. During the summer she went lame in right fore foot and a sore spot appeared on the sole, which has since turned into a running sore. A number of my cattle have been similarly affected during the summer, and what seems very peculiar, always in the right fore foot. Now, can you answer the following questions?"

1. What is the cause of the cow retaining her calf so long?
2. What is the matter with her functions?
3. What ails her foot, and what is proper treatment?
4. What effect will this have on her next calf and on her milking?
5. What effect will old milk have on calf?
6. What is the best substitute for milk for calf, as I have not enough to supply it?"

1. The period of gestation in the cow is from 230 to 325 days, from which you will see that the term of your cow's pregnancy, 200 days, is not uncommon.

2. Through inflammatory action, the milk glands have become indurated, and in consequence their functions have become temporarily suspended, if not permanently destroyed. Your cow being up in years, we do not think that treatment would be advisable, and would suggest the propriety of beefing her.

3. The sensitive sole has become inflamed and cankered either from external injury or constitutional causes. Poultice the foot with linseed meal for forty-eight hours, changing the poultice twice a day, and then apply to sore parts once every alternate day until healed: Sulphuric acid, one ounce; water, six ounces; mix.

4. We would not advise you to breed the cow again.

5. If fed in moderate quantity, no bad effects will be likely to result from it; it is advisable, however, to feed a little boiled flax-seed with it once a day.

6. Oatmeal gruel and boiled flax-seed judiciously fed.

POULTRY.

Poultry on the Farm.

BY MRS. IDA E. TILSON, WEST SALEM, WIS.

A few years ago, I purchased a setting of eggs that yielded chickens which, despite my usual care, showed a strong tendency to bowel complaint—a tendency so persistently reappearing in every generation, that I felt compelled to give up an otherwise beautiful strain. The feather-eating habit only once got into my flock, and it must consistently be regarded as an inheritance then, because those of my hens guilty were hatched from eggs bought where I soon afterward saw several stripped necks. My first Leghorns for some generations were so wild I got an unfavorable opinion of the whole breed, but they gradually grew tame, and other Leghorns, purchased elsewhere, were quiet enough, so I saw docility could be bred in or bred out. Shakespeare's sentiment, that mercy "blesseth him that gives and him that takes," is very true in poultry quarters, for a gentle bird certainly seems to enjoy herself better, and is easier handled, managed and marketed. To me, it is as plain in the case of fowls as with people, that good inheritances place them a long way on the road toward success. The law of heredity, however, is a double one; both desirable and undesirable characteristics can be impressed, just as an engine may go forward or be reversed. Neglect turns the best pedigree strain into "scrubs," while liberal feeding, strict attention to digestive organs, and general care, especially when fowls are young, develop everything which is good in even the commonest, and show how that long-sought "best breed" will come. It was Henry Ward Beecher, and farther back, Shakespeare, who settled on the proportion that being twenty men to preach would be easier than being one to practice. So far as my own experience and practice are concerned, I have, though it wrung my heart, marketed several pretty egg-eating and feather-eating hens, and done it so promptly that those vices never gained a real foothold. Many have found mixed flocks productive of mixed feelings, so, whatever else might be tolerated here at home, I cannot, in the interests of peace and society, risk a roaming habit and inheritance; hence, if any hen begins to trouble our neighbors, I do speedily dispose of her, though usually my brightest and most enterprising specimens. I remember one beloved but runaway Poland had to be caught while laying within her chosen basket in our woodshed. If I buy fowls, I try to get those which have been well cared for, and was surprised, last summer, to find a roaming disposition in some otherwise fine purchases. On inquiring of their former owners, I learned that the main hen-house becoming too full, they had put a temporary building off in a field, among the bugs, and there reared my chickens. As I much desire healthy, prolific, tame, well-behaved hens, established in character, I usually raise my own, and then know what I have. If a flock be so fed that they do lay more than the usual number of eggs in a year, they should transmit to their progeny some tendency to extra laying, and if this feeding and laying be kept up for a series of years, then prolificness probably becomes hereditary. The "Rural New Yorker" says a hen laying 130 eggs a year is a pretty good hen. My large flock of about a hundred, roosting in two houses, but undivided daytimes, have twice averaged 130 apiece, and done almost as well other years. The sum total of one year differed from that of the preceding year by only two dozens. Continual inbreeding decreases vigor and consequently egg-production, hence new blood must periodically be introduced into a flock; but though I buy new stock, I never entirely relinquish the old—I keep, as it were, a substratum of that on which to build. Those biddies have been educated, and I believe will continue to show that education is power. I am thankful for all that fanciers have done in the line of beauty, symmetry and docility, and, as they cross poultry families to gain vigor, I sometimes go farther and cross breeds, but buy full-bloods, and recommend neither the crossing nor raising at all of mongrels. My chicks have seemed fine for several years, but I thought this past summer that if there was any such thing as superior ones, I would try the plan of fewer and better. I cooped 73; three when very little were trodden to death by their mammas, and one, nearly grown, disappeared mysteriously, leaving not even a feather behind to "point a moral and adorn a tale." Sixty-nine fully matured, without a single case of bowel complaint or sickness of any kind, and without doctoring, unless a little red pepper be called medicine. I once had an old hen do very well all by herself, bringing off eight chicks from a nest on the ground, but they had bad, sore eyes a long time, caused probably by dirt under their lids. Another hatched quite a brood in a hog-house, but got out of the muddy swine-yard with only one live chick, which she, however, raised, and I named "Victory." These are specimens of "let-alone" broods. Fowls are often left to care for themselves in summer and autumn, and then blamed for doing it. Such a course makes stunted, backward pullets and thievish, unprofitable hens. If eggs are expected for the holiday call and prices, layers must be prepared long ahead. I bought my wheat last July, thinking it would never be cheaper, and gravel, carrots and peppers are engaged. Enough rye and barley were left over, and we have raised our own oats, clover,