prove detrimental to the interests of our readers. We have sacrificed hundreds of dollars' worth of advertising in the past, because we had good reason to believe that what was attempted to be advertised in our columns did not deserve commendation; and in the end, what would injure our readers would indirectly prove detrimental to ourselves.

We are pleased to note that some of our dairy, live stock and agricultural contemporaries in the United States are now doing commendable work in following up this subject and condemning the use of these alleged "preservatives," which, though not new, have a faculty of renewing their youth from time to time. Prof. Henry, of the Wisconsin Agricultural Experiment Station, is also to be commended for dealing out some vigorous and sensible advice on this subject.

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.]

Miscellaneous.

MILKING MACHINES.

JOSEPH R. TAYLOR, Taylor Village, N.B.:—"Will you please inform me, through your valuable paper, if there are any good milking machines made. If so, where and for what price can they be obtained?"

[Up to the present date no sufficiently reliable milking machines to authorize our recommendation have come before our notice. There are milking machines manufactured, but of their practical value we know nothing. Sometimes a cow with one tough teat can be milked with a milk syphon or milking tube, but even the use of these is discouraged by veterinarians. A valuable breeding cow, that is tough to milk, can be made useful in suckling a couple of calves; or, if this is not practicable, she had better be fitted up for the butcher.]

WHEAT AS A FOOD FOR STOCK.

ARTHUR SPENCER, Brooklyn, Ont.:—"Would some of the readers of the FARMER'S ADVOCATE, who have had experience in feeding wheat, kindly give what they consider the most successful methods of feeding it to horses, milking cows and hogs?"

[We invite correspondence in reply to the foregoing query. Practical letters on this subject will be helpful to many of our readers.]

PRODUCING COCKERELS OR PULLETS AT WILL.

J. B. T., Taunton, Ont.:—"Would you kindly inform me, through your Questions and Answers column of the ADVOCATE, whether there is any reliable method of producing pullets or cockerels at will, by the selection of eggs?"

[The selection of eggs is guided by the fact that eggs producing pullets are almost invariably smooth and shorter in proportion than such as produce cockerels, which latter in nine cases out of ten are distinguished by a wringled appearance at the small end of the shell. Repeated experiment has satisfied me as to the correctness of this rule.

REV. J. H. HARRIS, Brooklyn, Ont.]

REMEDY FOR GRASSHOPPERS.

D. T. J.:—"Would you kindly inform me, through the medium of your paper, whether land plaster would have any effect in checking the ravages of grasshoppers on turnips?"

[Land plaster alone would have little or no effect on grasshoppers. One pound of Paris green, mixed with fifty of plaster and dusted over the turnips, would have the desired effect. It would be well to have it done when there is dew on the leaves, as the powder will then stick better. The most convenient way of applying this powder is to make a bag of cheese-cloth, or some other light material which will let the powder through easily, and put about two pounds of powder in the bag, leaving enough slack at the top to allow it to be shaken freely.

JAMES FLETCHER, Entomologist, Ottawa.]

COMPTONIA ASPLENIFOLIA.

DUNCAN MCKENZIE, St. George:—"I enclose a twig for identification and nature. When can it be transplanted?"

[This plant belongs to the order *Myricaceæ*—an ornamental, hardy, deciduous shrub, requiring peat earth and a shady situation; propagated by layers, which should be put down in autumn. Flowers are in whitish catkins, which come out in April; leaves are simply alternate, having tooth-like edges; grows from 3 ft. to 4 ft. high. The shrub is commonly known as Sweet Fern, although it is not a fern at all. It has a place, in scientific classification, near the birches, and it is a close relation of the bay berry or wax myrtle, and the sweet gale. A fluid extract of the plant is used for diarrhœa.

JOHN DEARNESS, I. P. S., London.]

Telegraphic advices from Winnipeg state that twenty-one head of cattle on the Brandon (Man.) Experimental Farm, originally stocked with pure-breds from the Central Farm at Ottawa, have been slaughtered, owing to the existence of tuberculosis.

VETERINARY.

Dentition and Dental Diseases of Farm Animals.

BY DR. MOLE, M. R. C. V. S., TORONTO.

(Continued from page 284.)

PART IV.—THE AGE OF THE PIG.

The pig's mouth is very large, the fossives extending backward, the upper lip blends with the snout, forming the nasal disk, sometimes called the button, from the two holes or nostrils; the under jaw is short and pointed; and it is one of the few existing animals which retain the typical number and variety of teeth, forty-four in number, consisting of 12 incisors, 4 canines and 28 molars, 12 pre-molars and 16 true molars. The 6 incisors differ from each other in a remarkable degree; the two central and two lateral in the upper jaw resemble the horse, by having a date cavity or infundibulum, while the corners closely resemble those of the dog, having a fleur-de-lis shape; they are isolated and small in proportion to the other four. The incisors in the lower jaw are long, nearly straight, project forward, somewhat resembling the teeth of the rodent or incisors of the hare; the lower corners are isolated, but smaller than those of the upper. The canine teeth, temporary and permanent, are well developed, especially in the male, having the character of true tusks. They are generally miscalled tushes; the lower are the largest and curve outward, forward, upwards and backwards; the upper tusks pass outwards and downwards; are three-sided, destitute of enamel on the posterior surface, and by reason of this wear obliquely to a point.

The molars vary in shape, gradually increasing in size from the first to the last, which is large and strong; they resemble more the teeth of the human subject, being mixed between herbiverous and carniverous. The first on each side are permanent; the next three are temporary, and the remaining three permanent.

Although there are some few exceptions to the rule of the development of the teeth of farm animals, the exceptions are always in favor of the exhibitor, but of all animals none are so free from dental irregularities as the pig, and the evidence of age, which a skilled observer may obtain from a careful examination, may be accepted as free from any suspicion of error; but we have met with many who think that they know all that can be taught on this subject and then be in error.

We saw a pig entered at the last Toronto Exhibition as being only one year old, with four central permanent incisors well up and laterals just developing. He did not win a prize, so that it was of no consequence.

The teeth of the pig as indicative of the age: He is born with eight teeth, four corner incisors and four tusks well developed, as may be seen in figure 24.

Fig. 24.

They have very much the appearance of small tusks, are situated at the side of the mouth so as not to injure the nipple of the sow when suckling. (See figure 24).

The tongue of the young pig is fringed along its border, and, as in the act of sucking the organ it is doubled along the middle, these fringes overlap and grasp the nipple so hard that when the sow rises the young pig will be often seen hanging to the teats. This arrangement probably protects the teats of the sow against injury from the pointed teeth of the young. At one month the temporary second and third molars are well developed, whilst the central incisors and first molars are being cut. At two months signs may be seen of the lateral incisors, when they should be weaned from the dam. At three months the temporary teeth are fully developed, although not quite level. The corner

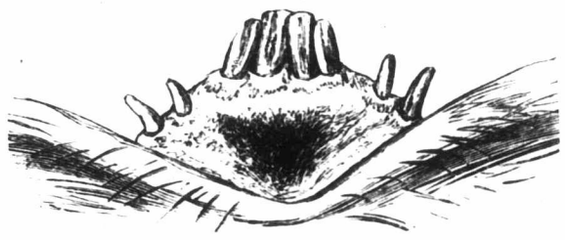

Fig. 25. Three months.

teeth and tusks are further removed than at birth, owing to the growth of jaw. At five months there are signs of cutting the pre-molars, as well as the fourth, which is remarkably regular in its appearance. At nine months the corner permanent incisors are well up and the tusks may be through the gums. If these are well up, quite free, and the animal described as only nine months old, look again, and disqualify if the molars are cut, for at ten months old the fifth molar is cut. (See Fig. 26).

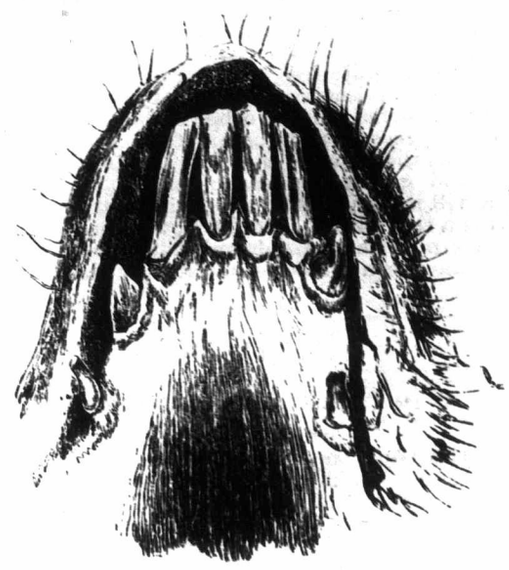

Fig. 26.—Nine months.

At one year old the central incisors are said to be cut by many breeders, but we have often found the temporary teeth in position, and always carefully look for the anterior temporary molar.

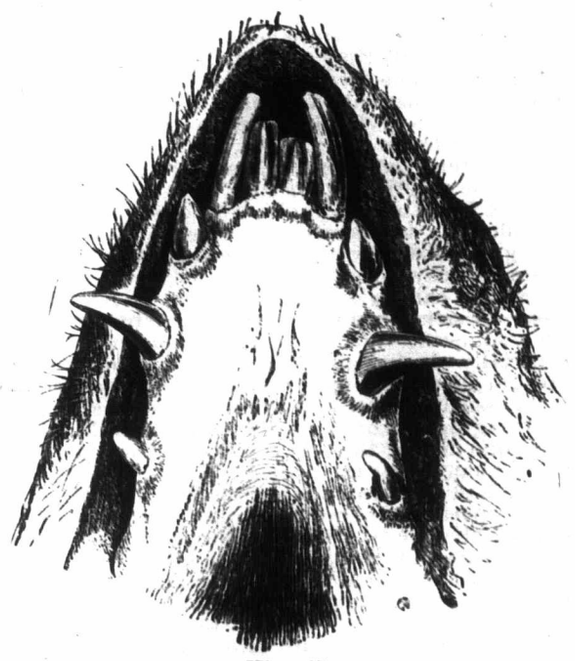

Fig. 27.

Central permanent incisors and tusks of pig at 1 year.

At one year and three months the first, second and third molars are up, but their sharp points have not become worn; these teeth offer confimatory evidence in all cases of doubt, where the incisors are too fully developed for the recorded age.

At eighteen months the sixth molar is cut, the lateral temporary incisors are being changed for permanent, although they frequently remain until the animal is one year and six months old.

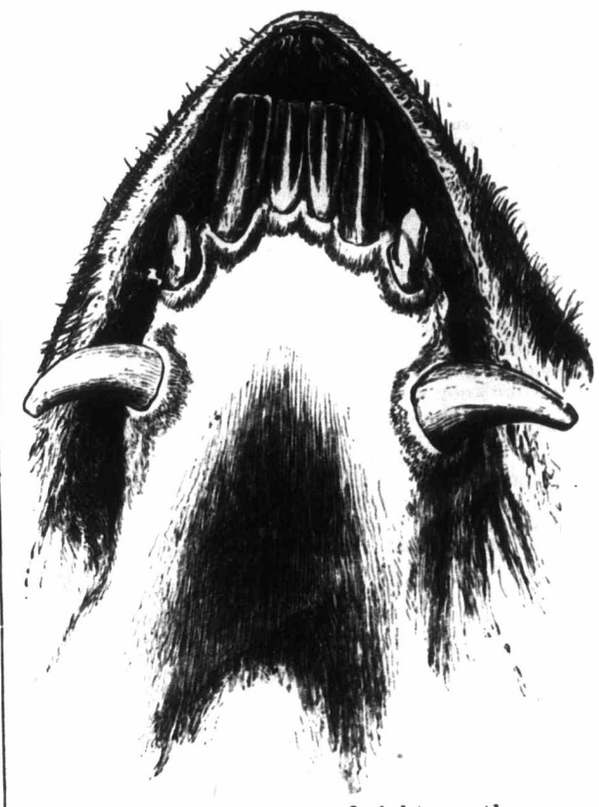

Fig. 28.—One year and eight months.

Animals are entered at shows from twelve to eighteen months; it is therefore necessary to note the condition of the central incisors, anterior molars,