

checks secretions. It should be given in the form of laudanum, in from 2 to 4 drams, in a little of the mother's milk, every three or four hours until the diarrhoea ceases. Care must be taken to not continue the doses after cessation of diarrhoea, else we will produce constipation. In the meantime, we must endeavor to get the foal to suck, and if he refuse to do so, small quantities of the mother's milk should be given every hour or two out of a bottle, and if he be quite weak, stimulants, as about $\frac{1}{2}$ oz. of good whiskey or brandy, should be mixed with the drench to keep up the heart's action. If the patient be a couple of weeks old, or older, the amount of laudanum must be correspondingly larger, and to it should be added about 2 drs. each of powdered catechu and prepared chalk, and if necessary the stimulants and nourishment in proportion to age and size given as drenches. In the majority of cases where treatment is resorted to in the early stages, two or three doses of laudanum, with or without the addition of the astringents mentioned, according to age and size, will check the disease, without the use of stimulants or forced nourishments, but if the disease has been in operation for a few hours or longer before treatment is resorted to, it usually requires very careful treatment and attention to effect a recovery. If the weather be cold, the patient must be protected from draft or chill, and if very warm weather, he must be placed in a cool place.

"WHIP."

STOCK.

Goitre in Lambs.

By J. D. Stewart, V. S.

The disease known as "goitre in sheep," although not analogous to that of the same name in human medicine, is nevertheless characterized by enlargement of the thyroid glands (or bodies) situated in the neck immediately behind the throat.

It has been fairly extensive in certain districts, and appears to be confined to late or summer lambs. In some instances the losses caused have been serious, as many as eighty per cent. of the lambs dying. Goitre is neither infectious nor contagious. It may, however, be regarded as congenital, as many of the lambs are born with enlarged glands. Its duration is usually from birth to five to seven days, although a small percentage of the affected lambs have lingered as long as two months.

Symptoms.—Even at birth the thyroid glands of the neck are enlarged, and the lambs appear weak constitutionally. Some die, giving a few gasps, immediately after they are born; others in a day or two, owing to their inability to suck their mother's milk. The most pronounced symptoms observed in the majority, four days or more after birth, are the enlarged thyroid glands and difficulty in breathing. The normal size of these glands is about that of a horse bean, and each weighs less than a quarter of an ounce. In this disease it is common to find them weighing four or five ounces, and measuring three to four inches in length. In the case of a lamb that survived until it was two months old, the glands weighed eight and eleven and a half ounces respectively, while each measured over six inches in length. The difficulty in breathing is often very marked, each breath being accompanied by a grunt, the mouth kept open, and the tongue protruded, while the flanks heave. Exertion or excitement brings on an attack of breathlessness, the tongue and inside of the lips becoming livid in color.

Post-mortem Examination.—The chief observations made were, the blood, though dark in color, coagulated firmly; the absence of dropsical effusions in tissues of neck and cavities, excepting in old cases, when a certain amount of dropsy in cavities was present; the absence of internal parasites (fluke worms, etc.); the healthy appearance of all organs, with the exception of the thyroid glands and the lungs, the glands being much enlarged, and on incision, found to be distended with a straw-colored watery effusion, while the lungs, though healthy at birth, in a few days become dark and engorged with blood.

Cause.—The mother's milk, blood and fluid from the affected organs of sick lambs were examined microscopically with negative results. Inquiry as to the present supply of food, and the condition of the ewe's milk glands, did not furnish any satisfactory explanation, while in no instance could the influence of the rams used be regarded as a determining factor. It is, however, of more than ordinary significance that many of the affected lambs were the offspring of 20-months-old ewes that had undergone great hardships during the recent drought, and in many instances the mothers themselves are progeny of ewes that were half starved and had travelled for the greater portion of their lives.

Treatment.—The affected lambs, with their mothers, to be separate from the flock, and kept in a small paddock close to the yards. The wool to be clipped off skin over swellings in throat, and the part painted thoroughly by means of a toothbrush, with the following liniment: Tincture of iodine, spirits of camphor, each one part; spirits venii methylated, two parts.

It is necessary to apply the liniment every fourth

day, until recovery takes place. This usually occurs in about ten days. In order to avoid a recurrence of the disease at next lambing, it is advisable to feed the ewes liberally, and allow tonic licks until a month before they are due to lamb, in order to build up their constitutions. Ewes should not be put to the rams too young; while a late or summer lambing should not be attempted with ewes whose lambs have been affected with the disease during the past season.

Letters from Prof. Kennedy.

Our readers will be pleased to learn that Prof. W. J. Kennedy, head of the Department of Animal Husbandry, in the Iowa Agricultural College, and Vice-Director of the State Experiment Station, will, during his tour in Great Britain and on the Continent of Europe, for which he has been granted a year's leave of absence, contribute a series of



Prof. W. J. Kennedy.

Who Will Contribute a Series of Articles to the "Farmer's Advocate" During His British and European Tour.

articles to the "Farmer's Advocate and Home Magazine," giving his impressions of leading exhibitions, agricultural education, and other topics of special interest to Canadians at the present time. A progressive son of Canada, Prof. Kennedy's advancement under the flag of "Uncle Sam," in his chosen avocation, has been followed with interest on this side of "the line." As already announced in these columns, Prof. Kennedy goes abroad commissioned by the United States Department of Agriculture to investigate and report upon European live-stock conditions.



Wildwood Brino, by Wildbrino.

Three-year-old Standard-bred trotter. Winner of second prize three years in succession at Toronto Exhibition. Owned by T. H. Cole, Owen Sound, Ont.

The Sow and Her Litter.

The mother pig is so important a factor in successful hog-raising that the greatest care should be exercised in her selection. Select the sows when from three to four months old, from large, even litters of prolific family. A tendency to large litters is indicated by length and depth of side. She should be vigorous and well grown; have 12 or 14 well-developed regular teats, commencing well forward; side, long and deep; front legs wide apart, and breast full; back, nicely arched; legs, short and straight; head, small and somewhat dishd; a good feeder, and of quiet, contented disposition.

Feed her the very best growing and developing food available. Clover pasture, a little corn, chopped oats and shorts, is a good ration. Chopped oats for pigs should always have the hulls sifted out. Give plenty of exercise. Have her in healthy condition, well developed, but not too fat, and when eight months old breed her. It is not wise to breed much younger. One service is sufficient; more than that is useless and injurious. Place her by herself for a couple of days. See that she has no lice. If she has, spray with a sheep-dip, and rub a little grease on her ears and flanks. While pregnant, keep the bowels regular. Give lots of exercise, and feed a variety of blood, bone and muscle forming foods, such as oat chop, bran, shorts and barley. In winter supply steamed cut clover and a few roots. Discontinue the roots a short time before farrowing, as they have a tendency to make weak pigs, and slightly reduce her ration. Keep the bowels regular.

It is a good plan to have the sow acquainted with you, as you will need to be with her when the little fellows come, and she should trust you. Handle her and be kind, pet her a little, and talk to her.

Keep the sow by herself for about three weeks before her time is up, but don't confine her. Cover the floor of the breeding pen with a little cut wheat straw or short litter, and allow free access to water while she is making her nest. Watch closely if weather is cold, and as the little fellows come, dry them and place in a basket of cut straw until all are come; then place them on the mother for a drink. If any are weak, do this a couple of times, and there will be no further trouble with them. If she has been properly fed, there will be no fear of the sow eating her young.

Beware of milk fever! After farrowing give her nothing to eat for five or six hours, then give her a pail of lukewarm water, with a couple of quarts of bran in it. Feed only thin bran slop for a couple of days. If the young pigs are a little hungry it won't hurt them. By degrees add skim milk, shorts, chopped oats and barley meal until full ration is reached, then feed generously. She gives as much milk as a good cow, and it contains double the amount of solids. If scours appear in the young, it is due to over-supply of milk, and the mother's feed should be decreased. Give her a tablespoonful of copperas dissolved in her slop. If the teats become sore, pinch off the

little fellows' teeth—they are useless. Do not disturb her bed for a couple of days, but afterwards renew frequently. There should be a scantling around the walls of the pen eight inches from wall and floor to protect the little pigs. Give the run of yard as soon as they are strong; then the pasture, if in summer. Castrate the male pigs when about three weeks old.

When about that age, place a shallow trough apart from the sow, but where the young may go, and leave a little sweet milk in it. They will soon learn to eat. Increase the quantity, and add gruel and shorts as they grow; it will lessen the drain on the mother, and weaning will hardly be felt.