

Formalin for Calf Scours.

The South Carolina Experiment Station has been investigating calf scours, and makes a favorable report of the use of formalin. We quote the following paragraphs from their report:

Prevention.—The study of the cause of the disease and the conditions favorable to its operation, teaches us that cleanliness and care in the handling and feeding of the milk and proper quarters for the calf are necessary, if the disease is to be avoided. The milk must be fed fresh, and at blood temperature. Increase in the amount fed must be gradual, and overfeeding avoided. Calves do well when the milk is fed twice daily, but three

It requires, moreover, the frequent administration of medicine, which is not always convenient, and is never pleasant.

The condition demands a method of treatment that can reach and destroy the fermentative and putrefactive bacteria, whether they are located in the milk, in unclean feeding vessels, or in the stomach or bowels of the calf. The addition of formalin by a German investigator to cows' milk intended for the nourishment of infants, to protect them against tuberculous infection, suggested the use of formalin for this disease. Investigation developed that in laboratory experiments it had been found that one part of formalin added to

half ounce of formalin. The solution was put in an amber-colored bottle, and kept in a cool place to prevent decomposition. One teaspoonful of this mixture was added to each pint or pound of milk to be fed to the affected calf. This gave the drug in the proportion of one part to 4,000 parts of milk. In ten of the cases treated the formalin solution was put into the milk at the time of feeding. In two cases it was added to the skim milk immediately after separation. While no difference in results was observed, it would seem advisable to add the formalin solution to the milk to be fed to affected calves as soon after separation as convenient.

The calves used in the experiment were left with the cow the first twenty-four hours, then fed the dam's milk in a self-feeder for a week, and then gradually changed from whole milk to skim milk, at the same time having access to a box of corn meal or ensilage. The whole milk was fed fresh from the cow, but the skim milk was always twelve hours old. The milk from the cows was hauled from the barn to a dairy, a distance of one-fourth mile, after each milking. After being separated, the skim milk was placed in a spring until the wagon arrived from the barn with the next milking, about twelve hours later, when it was warmed to 98 degrees Fahrenheit, and hauled back to the barn and fed to the calves. The feeding vessels were rinsed after each feeding with hot water hauled from the dairy. Seven of the calves were brought in from another herd at one and two days old, and only received the dam's milk twenty-four to forty-eight hours.

The effect of formalin on the disease was tested under these conditions. When the first symptoms appeared, the amount of milk fed was reduced one-half to one pound, and one teaspoonful of the formalin solution was added to each pound or pint given to the calf.

Summary.—Twelve milk-fed calves affected with scours were treated by adding formalin to the milk in the proportion of one part of the drug to 4,000 parts of the milk.

Eleven recovered without any additional treatment—seven on the second day after the use of the formalin was begun, three on the third day, and one on the ninth day.

The other calf required additional treatment, but finally recovered.

Three cases of scours in calves being fed on grain and running at pasture were treated with formalin, but the drug did not prove effective in this form of the disease.

The efforts of a certain Chicago live-stock paper to exonerate any and all of the big packers from mistakes or slack methods in preparing food products, smells to Heaven far more than hundreds of condemned pieces of meat.

At the recent Birmingham Show, every one of the forty-six bulls sold at over 100 gs. had more or less Cruickshank blood in their veins, and the best group of five yearling bulls was declared to be "one more triumph to that excellent infusion of blood, the Bates with the Cruickshank."

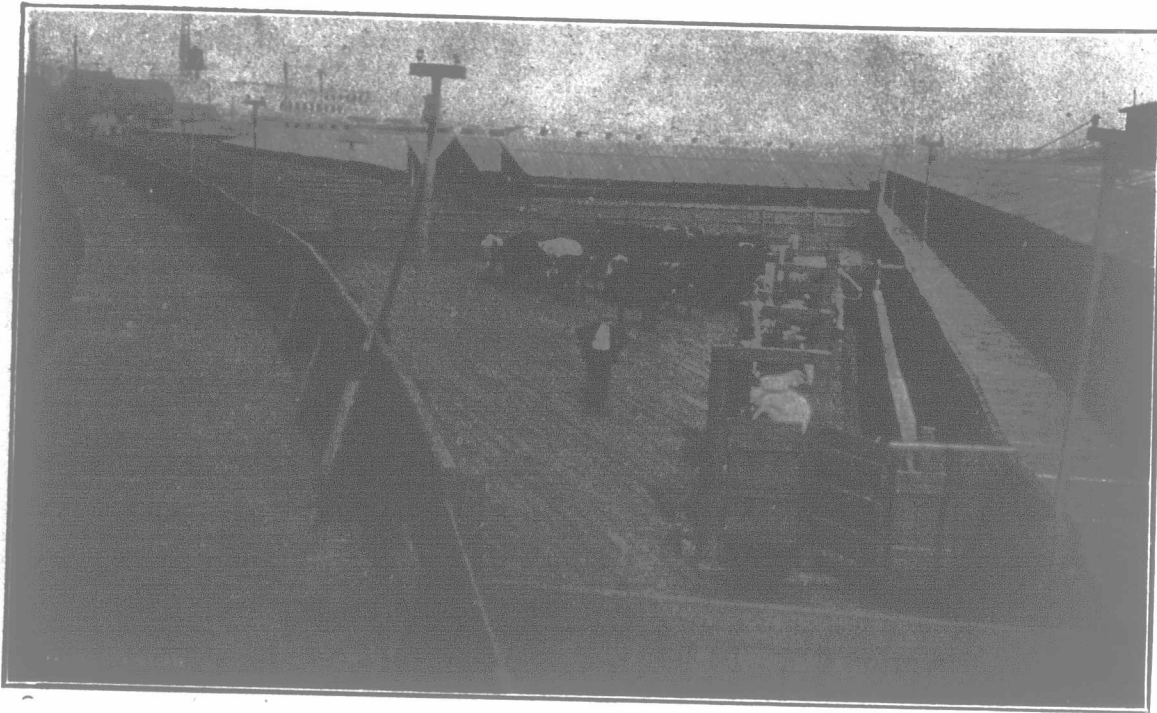
THE FARM.

Sandy Fraser's Advice.

Editor "The Farmer's Advocate":

Wad ye min' gie'in' me anither wee bit space in yer columns, to be used for the lastin' benefit o' yer farmer readers, and may happen their wives. Noo that I'll be havin' a wee spell frae the wark, I dinna' think I cud dae better than be exercisin' ma brain for the weelfare o' society in general, and the farmers in particular.

Sae noo, ma frien', gin ye'll listen tae me, I'll gie ye a few pointers in regard tae yer business that may no' be oot o' place at this time o' year, an' if I say anything that disna' agree wi' a' that I hae said in the past, ye maun juist remember that a mon has aye the richt tae change his min'. Noo, in the first place, regarding oor occupation, gin we are tae keep up oor reputation, we should na' lose an opportunity at hame or awa' o' runnin' doon the business an' grumblin' at oor bad luck, or the hard times, or the hard wark. Ye can aye fin' something to fin' fault wi' if ye hae anything o' an imaginative min'. Ye ken the winters in this country are awfu' cauld an' snawy, or else they are sae warm that we hae na' eneuch snaw tae cover oor hayfields, and the frost kills it a'. Then, in the spring, which may happen alang about the first o' June, if a' goes weel, ye are like to hae ony amount o' trouble wi' yer coos an' ither stock, if ye hae been as sparlin' o' the fodder durin' the winter as ony savin' man should. I've kenned o' farmers havin' all their coos' tails polished like whipstocks, frae helpin' them to get up in the spring o' the year. Hooever, this is naething, if ye save the feed and bring them through alive. If they dinna' gie vera much milk durin' the simmer, it will be sae much the less for yer auld wumman to carry frae the stable an' attend tae, for nae doot ye are gude



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feeds are better. After each feed the feeding vessels must be thoroughly cleaned, rinsed with boiled water or steamed, and then exposed to the sun. All the other vessels used in handling the milk must, of course, be properly cleaned. The calves must have dry quarters and protection from chill winds and rain. If these details are attended to, the disease will not occur, but constant vigilance is required, or something will be overlooked or neglected, and the trouble will appear.

Curative Treatment.—The usual method of treating the disease is to administer a laxative, such as castor oil, to clean out the bowels, conjoining with it an antiseptic, as creolin, to disinfect the digestive tract; and then follow this with drugs having an astringent and sedative effect upon the stomach and bowels. This treatment is directed to the removal of the irritating substances from the stomach and bowels, the destruction of the fermentative and putrefactive bacteria within those organs, and the soothing of the irritating substances and bacteria. Therefore, this method of treatment is not always efficacious.

4,000 parts of milk did not interfere with the action of any of the digestive ferments in digesting the milk. In another experiment, milk containing the drug in proportion of 1 to 4,000 was fed to calves for over a month without any injurious effect upon the digestive organs. Contrary to interfering with the digestive function, formalin in this amount appeared to favor it, for the milk containing the formalin was more completely digested than the milk without it. The effect of formalin on the bacteria of milk had also been tested, and it was found that one part of formalin in 4,000 parts of milk would prevent the development of the common bacteria of milk.

Formalin Was Tried.—It was therefore decided to try the effect of formalin in this proportion in the treatment of milk-fed calves affected with "scours." To make the administration of the drug as convenient as possible, it was diluted with water in such quantity that when a teaspoonful of the mixture was added to each pint or pound of milk fed the drug would be present in the proportion desired. This was accomplished by adding 15½ ounces of distilled water to one-



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