

## BLOATING IN CATTLE

Gases From Fermenting Foods Create the Trouble.

The Cause and Symptoms of the Ailment Fully Described—Methods of Relief Suggested, Both Simple and Heroic.

(Contributed by Ontario Department of Agriculture, Toronto.)

**T**HIS condition, known as Tympanitis, Bloating, Hoven or Blown in cattle, consists of distension of the rumen or paunch with gas. The most common cause is a sudden change from dry food to a liberal supply of green food of any kind, principally to the different varieties of clover, and more particularly when the clover is in flower. It frequently occurs from the voracity with which cattle that have been accustomed to dry food consume green fodder. Hence it is more prevalent in the spring than in other seasons. It may result from feeding too freely on green food of any kind, especially on that upon which dew or rain is present, and more particularly when frosted; hence is not uncommon in the fall when cattle are allowed to consume clover, rape, turnip tops, etc., when frosted. Any food that readily ferments, if taken in sufficient quantities to temporarily check digestion, will quickly form gases and cause bloating. It is often a complication in cases of choking, the mechanical impediment in the gullet being the direct cause by preventing escape of gas through that organ. Sudden changes of diet of any kind may cause the trouble, and insufficient secretion of saliva may have the same effect.

While some of the above-named causes usually precede an attack, it is not uncommon to notice a well-marked case for which no such cause can be traced. Such cases are doubtless due to some unsuspected and not well understood temporary derangement of the digestive glands and muscular coat of the rumen. Any condition that causes torpidity of the rumen may cause bloating, even though no change of food of a dangerous nature has taken place. Torpidity of the rumen occurs in debilitating diseases, in fact in most diseases of the ox, and also from the introduction of excessively cold material, as frosted fodder, into the organ.

**Symptoms.**—The patient exhibits symptoms of pain and uneasiness by lying down and rising frequently, kicking at the belly, etc. Rumination is suspended and food refused. There is general depression, protrusion of the muzzle, projection and congestion of the nostrils, increased flow of saliva, and usually moaning during expiration. The back is arched and there is a more or less well-marked swelling of the abdomen, especially marked on the left side between the point of the hip and the last rib. If this be pressed with the finger it will be found to be firm and its former condition when pressure is relieved. If tapped with the fingers a resonant, tympanitic or drum-like sound will be heard, hence the name "tympanitis." Distension of the rumen causes forward pressure upon the diaphragm (the muscular partition between the abdomen and lung cavity), hence lessens the space of the lung cavity and causes difficulty in respiration. Death may occur quickly from rupture of the rumen, rupture of the diaphragm, suffocation, or absorption of gases.

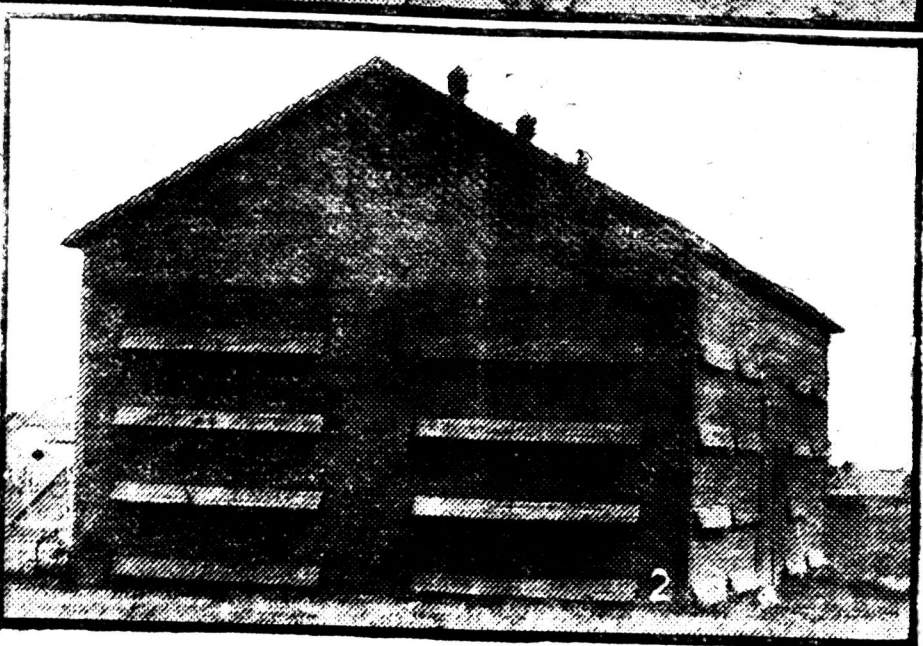
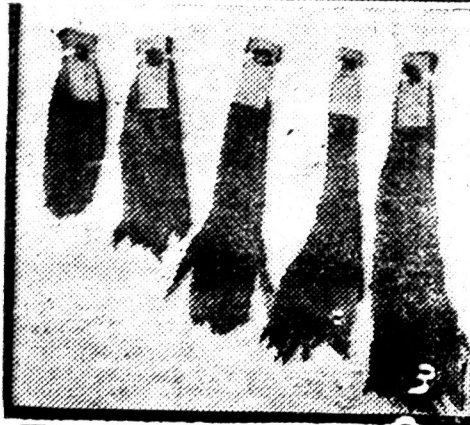
Treatment must be directed to remove or neutralize the gases, and prevent the formation of more. It will depend upon the severity of the attack and the degree of distension of the rumen, whether it will be wise to attempt the immediate removal of the gases by an operation, or administer drugs to neutralize them. When bloating is not excessive, with little or no danger of death occurring quickly, the administration of any drug that will neutralize the gases may be effective.

For this purpose oil of turpentine, commonly called "spirits of turpentine" is probably the best simple remedy. This is given in 2 to 4 oz. doses (a tablespoon holds about 1/2 oz.) according to the size of the patient and state of distension. This should be mixed with a pint of raw linseed oil. When this cannot be procured, melted butter or lard or new milk answers the purpose well. If necessary the dose may be repeated in one to two hours.

Carbonate of ammonia, 4 to 8 drams, or bi-carbonate of soda, (baking soda) 1 to 1 1/2 oz. in a pint of water, also acts well, but not so surely and promptly as turpentine. It is also good practice to put a hay rope or piece of wood about 2 inches in diameter into the patient's mouth and fasten it there. This facilitates the escape of gas through the gullet. In cases where bloating is extreme the gases should be removed by mechanical or surgical means. In some cases the passing of a rubber tube down the gullet to the rumen will give immediate relief. When this fails an opening must be made through the skin and coats of the rumen at the most prominent part in front of the point of the left hip. The hair should be clipped off the seat of operation, and it, with the hands of the operator and instruments, disinfected with a 5 per cent. solution of carbolic acid or one of the coal tar antiseptics. The proper instrument for this operation is a trocar and canula, but when this is not on hand an ordinary pocket-knife can be used and the lips of the wound kept apart to allow escape of the gases.

After bloating has disappeared it is good practice to administer a laxative of about 1 lb. epsom salts or 1 1/2 pints raw linseed oil, and feed lightly for a few days.—J. H. Reed, V.S., D. A. College, Guelph.

## MY LADY NICOTINE IN CANADA



(1) White Burley Nearly Ripe, in Ontario.  
(2) A Good Type of Curing Barn.  
(3) Fermented Cigar Leaf from Quebec.

Tobacco culture in Canada is an industry of comparatively recent date. Extensive development has taken place in the past twenty-five or thirty years, and recent seasons have proved the adaptability of widely separated sections of the Dominion to this very profitable line of agriculture. Since the protective duty of 25 cents per pound has been imposed on all foreign leaf tobaccos, the Canadian industry has received a yet greater stimulus, and interest in the culture is becoming wider and more diversified yearly.

The two principal provinces where tobacco has been successfully grown for many years are Ontario and Quebec. Very successful results have been obtained also at Kelowna, in the Okanagan district of British Columbia, and the growing of tobacco may be said to be firmly established as an industry there. Recent experiments in the Lethbridge irrigation district in Southern Alberta, would indicate great possibilities for the growth in the prairie province.

Tobacco, in Ontario, is grown in the counties of Essex, Peels, Kent, Prince Edward, Elgin, and Lincoln. A total of 9,226 acres among these counties was devoted to the cultivation of the tobacco plant in 1919, producing a yield of 10,709,400 pounds, or an average of 1,150 pounds per acre.

The Burley variety, suitable for chewing, is grown in five counties: Essex, Kent, Lincoln, Maryland and Havana in Lincoln, Maryland and Prince Edward County with success. During the past few years the growing of bright tobacco (dus cured) has extended rapidly on the light sandy loams near the shores of Lake Ontario, and some gravelly hills with good drainage. The annual production of this variety is nearly 1,000,000 pounds, with the yearly demand increasing. A limited amount of Seed Leaf and Fire cured leaf of the heavier type is grown in certain sections. The cost of cultivation in the province, including the labor of the grower, has been estimated at from \$50 to \$75 per acre, and the average yield about 1,300 pounds per acre.

The increased demand, and higher prices of recent years have given tobacco growing in Ontario a considerable impetus. The provincial Board of Agriculture, realizing this, instituted a tobacco station at the Harrow experimental farm, which has done valuable work in proving species of plants adapted to the various soils of the province, and encouraging limited production and improvement in quality rather than a large acreage and mediocre quality by improved methods of culture.

The tobacco production of the Province of Quebec for the year 1919 was about 10,000,000 pounds and there were 22,404 acres under cultivation. As a tobacco growing area, the French-Canadian province has been coming more to the fore every year. This is illustrated by the fact that in 1911 there were only 12,134 acres devoted to this culture, in the counties of Berthier, Joliette, L'Assomption, Montcalm, Fortneuf, Richelieu, Rouville, Terrebonne, Verchères and Yamaska the industry is carried on a very large scale. There are federal government stations at Saint-Jacques de L'Achigan county of Montcalm, and at Saint-Cesaire, Rouville. In many counties the tobacco plant is grown for cigar manufacture, the principal species being Havana, Connecticut, Pennsylvania, Ohio, Wisconsin, Comstock, Summers Spanish, Cannelle, and Persian Rose; but greater success is achieved with pipe tobaccos, such as white burley, red burley, blue prior, yellow prior, heater yellow mammoth and Tennessee Red.

The planters of the Yamaska Valley have formed a co-operative society and established at Saint-Cesaire a large warehouse for the curing and sale of Comstock Spanish tobacco as fillers and binders for cigars. The society sells annually from 500,000 to 600,000 pounds of

tobacco at from 30 to 40 cents per pound. The purchase of tobacco according to quality has greatly improved methods of cultivation and treatment.

The growing of tobacco in British Columbia is practically confined to the area surrounding Kelowna in the Okanagan Valley. The total 1919 output, which amounted to about 120,000 pounds was sold at 20 cents per pound to a Quebec manufacturer. Interest in tobacco production in the Pacific province is on the increase, and in many sections of its area can be found warm, sunny, well-drained slopes of sandy deposits well adapted to the cultivation of tobacco plants of the heavier type.

The possibility of successfully growing and curing tobacco in Southern Alberta has been clearly demonstrated by the experimental farm at Lethbridge. Sixty plants, grown in the season 1919, produced prolific foliage, which was cured on the farm and made into cigars. Experiments will be carried on a more extensive scale with a view to establishing the industry as a commercial proposition in the irrigation belt.

The successful growing of tobacco calls for rich and light soils containing a good supply of vegetable matter, and will yield the best results, however, rich in mineral elements, are not suitable for its growth. Good drainage of the subsoil water is essential. The soils of hillside, with a gentle slope, generally give excellent results, mainly on account of the rapidity with which an excess of water drains off. The best soils for successful growing are those which contain a sufficient proportion of clay and humus to enable them to retain a good supply of moisture, known as "loamy soils." Silt clay soils are the least suitable.

## CANADA TO BE IMPORTANT FUR MARKET



Canada is now exporting to other countries according to Dominion Government figures, \$14,000,000 worth of furs and skins in the course of a year, and a number are brought back into the country, purchased by Canadian dealers at foreign sales and resold to Canadians. The value of furs and skins exported during the fiscal year 1918-1919 was \$13,737,221. Of these \$9,743,464 worth went to the United States, \$3,763,955 to Great Britain, and \$230,202 to other countries. Some extent of the values to which these exports have risen can be obtained from the fact that the value of the export of furs and skins in 1917 was \$5,837,383. During the month of March 1919, the value of these exports was \$2,080,704 as compared with \$1,420,168 in the corresponding month in 1918. It has been estimated that eighty per cent. of the silver foxes of the world come from Canada.

For nearly four centuries Canada has been one of the largest and most productive fields of the fur trade, and it is impossible to estimate the number or the value of the costly pelts taken from the traps of the Dominion in this period. Yet, until quite recently, the fur trade was hardly organized on a business basis, and beyond the trapping and taking of the furs the various phases of the industry passed out of Can-

(1) Coaxing Silver Fox Pups with tempting morsels at a P. E. I. Ranch. (2) Canadian Wolves.

adian hands. Traders bought from the trappers and then the raw materials went to the large foreign markets. There has gradually dawned a realization of the money lost in this way, however, and in future Canada will market her own furs and Montreal become one of the most important fur markets of the globe. For years London, St. Louis and New York have been the selling centres to which Canadian furs have travelled and St. Louis had the world's premier fur mart. The auction at Montreal will be con-

ducted by a large company capitalised at \$5,000,000 and will be largely co-operative in nature. It is the intention to hold three auctions a year, the first about next March. The opening of a Canadian fur market is a natural development of artificial breeding and fur ranching. This industry is fairly general throughout Canada, and in Prince Edward Island the industry which has been in operation for more than thirty years, has assumed very important proportions. In 1914 there were in the island no less than 250 fox ranches with nearly 4,600 foxes.

## NEVER HAVE SEEN A DOG OR A CAT

Children in War - Scarred Europe Never Even Hear the Birds Sing.

When you grinned at the six-year-old son of the house romping in the yard with his dog, or watched his small sister carefully dividing her attention between ribbon bows for the house "tabby" and the robin on the lawn, did it ever occur to you that somewhere in the world there are little folks of the same age who have never seen a dog nor a cat nor heard a bird sing. Yet, there are some hundreds of thousands of youngsters in war-stricken Europe to-day who are ignorant of the existence of the furred and feathered creatures which help to make a Canadian kiddie's day worth while.

Jewish relief workers who have returned from the Eastern and Central European countries cite the absence of domestic animals and birds to illustrate the desolate barrenness of the countries that were swept again and again by the warring armies for nearly five years. Jacob Bashein, who had charge of a unit for the Joint Distribution Committee, the sole agency disbursing relief funds raised by the Canadian Jewish Relief Committee, the Central Committee for Relief and the Jewish Society's Relief Committee, has described the conditions there.

"In that bare stretch of country where there are scarcely any trees, no habitations other than the miserable dug-outs in which returned refugees exist,—the 'no man's land' of Poland—we did not see a single cat or dog, and in all the time we were there we never heard a bird sing. Armies have swept bare the country and trampled the ground to the consistency almost of rock, while shell-fire has blasted the countryside. No animal, even domestic animal was left there. So there are children to-day of five or six years of age who have never seen a dog nor a cat and have never heard the singing of a bird!"

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