

for it eventually weakens the industry in its most vital spot, the breeding herd. A percentage of the annual calf crop must be retained as prospective breeding stock, else the normal slaughterings of aged stock no longer fit for producing young, will be followed by a decrease in the breeding herd and later a marked shortage in production. In liquidating our calf crop we may be undermining the industry. The well-bred calf is the live blood of the live stock business.

Sheep have also suffered a heavy reduction, the total standing at 13,380 head, a number 1,750,000 less than in 1919: this is by far the smallest return ever recorded and is 29 per cent. below the average of the ten years immediately preceding the war.

Pigs, on the other hand, have increased in numbers and now total 1,995,000 head, the highest since 1916. Sows for breeding have increased to a relatively greater extent than other kinds of pigs, the addition being 40,000 or 15 per cent. The returns with comparisons follow:—

CATTLE.		1920	1919
		No.	No.
Cows and heifers in milk.....		1,827,560	1,943,670
Cows in calf, but not in milk.....		242,890	292,290
Heifers in calf.....		282,400	317,530
Other Cattle:			
Two years and above.....		1,178,160	1,167,080
One year and under two.....		1,108,840	1,271,390
Under one year.....		907,050	1,202,580
Total.....		5,546,900	6,194,540
SHEEP.			
Ewes kept for breeding.....		5,107,940	5,764,300
Other Sheep:—			
One year and above.....		3,009,850	3,568,040
Under one year.....		5,261,180	5,791,970
Total.....		13,378,970	15,124,310
PIGS.			
Sows kept for breeding.....		289,500	250,750
Other pigs.....		1,705,240	1,547,720
Total.....		1,994,240	1,798,470

Ottawa

Live Stock Branch.

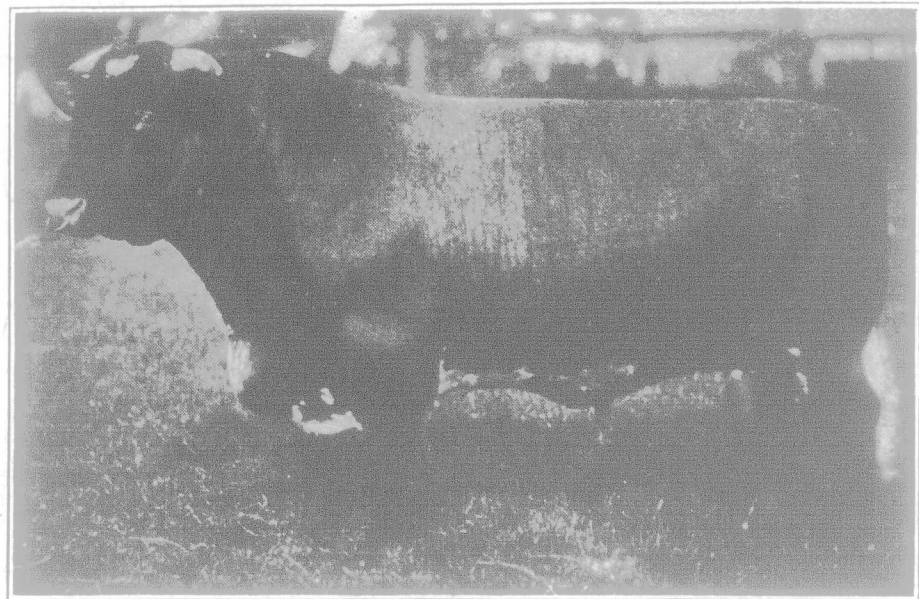
Selecting Stockers and Feeders.

Throughout the country a large number of steers are carried over or finished during the winter. Certain sections of the Province are apparently more adapted to winter feeding than others, consequently in some counties there are numerous farms on which anywhere from ten to thirty bullocks are finished for the block on the products grown the previous season. In other counties lighter stuff is purchased in the fall, wintered as cheaply as possible on silage or corn stover and straw, and then turned on grass in the spring to be finished for the market the following fall. Whichever line a person is following, the stock is picked up during the fall and the success of the feeding operations will depend to a large extent upon the quality of stuff purchased. The right classes of cattle for fattening purposes are none too plentiful and are apparently becoming scarcer each year; consequently in order to fill the stable with feeders it is often necessary to take some cattle that are of inferior quality. In order that a person may have a choice, it is advisable to purchase early, especially if one has plenty of pasture. Stocker and feeder cattle have been commanding particularly high prices, and unless they are of good quality and make rapid gains the price of the finished article must be high in order that the owner break even. A good many have made big money at steer feeding, but they are exceptionally good judges of stock and pay the price in order to secure the animals that will economically convert the roughages and concentrates of the farm into meat. The mongrel-bred animal with a narrow muzzle, long, slim head, and wedge-shaped conformation is seldom a profitable feeder, and is not a satisfactory proposition from any standpoint. The feeder doesn't want him, the drover doesn't want him, the butcher finds he does not cut up to advantage, and the consumer is dissatisfied with the roasts and chucks cut from a carcass of this kind. The animals which have been stunted in early life do not make as large and cheap gains as the animal whose growth has never been impaired. The young steer in a thriving condition and with plenty of weight is the one to buy, provided he has a strong muscle, short, broad head, great spring of rib, and a good barrel, indicating a strong-constitutioned, good-feeding animal. This kind with feeding usually rounds into a condition that causes him to fill the eye, and also to command the top price from the butcher. Size, smoothness and strong constitution are points which should be considered.

The time of feeding three and four-year-old steers is past; the market demands younger, lighter weight animals, and besides, if the stock has been properly fed from calfhood to two years of age, it will have attained a marketable weight and will prove a profitable feeding proposition, provided it has the breeding, character and quality. The person wintering stock can do with the lighter weight individuals, but where they are to be finished for the spring trade the heavier animals are usually the better proposition, even though they cost more per pound. The heavier the animal at time of putting it in the stable, the greater will be the profit on the spread. For instance, on a steer weighing 900 pounds, bought at ten cents a pound and sold at twelve, there would be a gain of eighteen dollars, without

counting the gain in weight. If the steer weighed 1,200 pounds there would be a spread of twenty-four dollars, and, as a rule, this weight of steer if of the right quality would bring a higher price on the April or May market than the lighter-weight animal.

Purchasing of commercial cattle is a much more difficult problem than it was a few years ago. In many districts grade cattle of the beef breeds have been displaced by cows of the dairy breeds. The progeny from these latter cows do not, as a rule, make the economical gains that are made by the progeny of beef-bred females. There has been considerable crossing and re-crossing of the breeds with the aim of producing better feeder stock, but the results have not been altogether satisfactory. Feeders find it very difficult to go out and pick up a carload of the quality of steers which they like to put in their stables. In order to get the good ones almost invariably a few common, mediocre ani-



Christian King.

Winning Shorthorn bull at the Royal. Owned by H. R. H. Prince of Wales.

mals must be taken, and very often at the same price as the good ones. These are more or less of an eye-sore to the feeder all winter, and the drover discriminates against them in purchasing the lot the following spring. The price of feeders is high this fall. What the market for the finished article will be next year no one can tell, but those purposing feeding a bunch of steers or heifers this year might advisedly pick them up early if they want to make a selection of good ones.

Septic Diarrhoea in Calves.

Septic diarrhoea, calf scours, or white scours, in calves is an acute disease of the stomach and intestines, rarely occurring in animals over one week old. It is characterized by a profuse diarrhoea, great exhaustion, and a rapid and generally fatal course.

Cause.—The cause of the disease has not been definitely determined. No one organism has been



Winning Dorset Ram Lambs at the Royal Counties Show.

isolated which seems to explain all cases. A close relationship between this disease, pneumonia and septicemia of sucklings, has been recognized. An epidemic of the disease often occurs concurrently with infectious abortion, hence it has been suggested that some outbreaks might be due to *Bacillus abortus*, but this has not been determined. Once introduced into a barn the infection (whatever its nature) remains there with remarkable tenacity, causing year after year new outbreaks of the disease. It appears possible for the trouble to develop in a stable without the introduction of any specific virus. This may be due to colon bacilli, which are on the premises, assuming a virulent form when introduced into the bodies of calves with lowered resistance, due to bad sanitation or other causes. The infecting germs may enter the body by the navel opening or the digestive tract. It is claimed that calves sometimes are attacked before they have sucked their dams. An intra-uterine infection is claimed to have been proved from the fact that the injection of a virulent

culture of the colon bacillus into the juglar vein of a pregnant cow was followed in eight days by the birth of a calf with the disease. The removal of the pregnant animal to a non-infected place does not always protect her young from the infection. Newly-born calves are most predisposed; and resistance against infection increases as the calf becomes better nourished by its natural food. After about eight days of age the danger of infection is supposed to have passed.

Symptoms.—The symptoms appear in from a few hours to three days after birth, seldom later. The principal indication of the disease is diarrhoea. The liquid faeces are at first expelled with considerable straining, and are of a yellowish color and usually foul odor. Later the excrement becomes whiter in color, thinner and often mixed with blood. The patient rapidly grows weak, languid, refuses to nurse, the eyes become dull and retracted, the anus relaxes, the evacuations occur without evident effort on the part of the patient, coma occurs soon followed by death.

Diagnosis.—This infectious diarrhoea differs from sporadic diarrhoea in young animals in the fact that it seldom attacks an animal over one week old, induces a foul-smelling, exhaustive, and rapidly fatal diarrhoea, and attacks many animals born under similar conditions. In diarrhoea or scours due to dietetic irregularities, older animals are attacked, the general symptoms are much less acute, the faeces are thicker, more yellowish and less fetid, and the cases will usually yield to medicinal treatment.

Treatment.—Medicinal treatment is seldom effective. In most cases it is profitable to kill the affected animal and burn

or deeply bury the carcass after covering with quick lime. Preventive treatment consists in disinfecting the barn and the external genitals and hind quarters of the prospective dam, before parturition, or removing pregnant animals to non-infected quarters and disinfecting the parts mentioned, and also disinfecting the navel of the young as soon as possible after birth and several times daily afterwards until thoroughly healed. All faecal discharges should be removed and burned or thoroughly sterilized. All stable partitions, mangers, floors (if the floor be of earth it should be removed to the depth of at least a foot and then filled in with fresh clay) should be thoroughly disinfected; and it is better if this be followed by a thorough coat of hot whitewash with five per cent. crude carbolic acid or one of the coal-tar antiseptics. The afterbirths, dead foetuses, and vaginal discharges should be completely destroyed. The stable can be disinfected by thorough scrubbing with hot water and soap and follow this with a thorough washing with a hot ten per cent. solution of crude carbolic acid, or a five per cent. solution of one of the coal-tar antiseptics. To be doubly sure, this last may be repeated or hot whitewash applied as above.

The vagina of the dam should be injected with a warm two per cent. solution of carbolic acid, and the external genitals, tail, buttocks, and udder well washed with a five per cent. solution of carbolic acid or one of the coal-tar preparations. As soon as born the navel of the foetus should be dressed with a strong antiseptic as tincture of iodine, a ten per cent. solution of carbolic acid or one of the coal-tar antiseptics or a solution of corrosive sublimate. The writer prefers the latter of the strength of 30 grains to a pint of water. This dressing to be repeated four or five times daily until thoroughly healed. Before nursing is permitted, the udder and teats should be washed with a non-poisonous antiseptic, as a five per cent. solution of one of the coal-tar antiseptics, and rubbed thoroughly dry or allowed to dry spontaneously before nursing is permitted. On the assumption that the disease may be contracted before birth, experiments are being conducted in the disinfection of the uterus before conception. Also a serum is being produced from the germs that are supposed to cause the disease, and used to increase the resistance of the newly-born animal. The hypodermic injections of bacterial culture have also been tried, as have also experiments to produce active immunity of the un-born foetus by inoculating pregnant cows with sterile extracts of colon bacilli, but the results have been conflicting.

WHIP.