

pounds ensilage, four pounds gluten, and two and a half pounds bran, per day are fed, as a rule. From the silo barn to the dairy stable, feed-carrier trucks convey the fodder right around in front of all the cows. As a point of interest, it may be mentioned that a change in soiling, recently, from old ensilage to freshly-cut corn (with ears) from the field, caused a falling off of ten gallons in the day's milk yield. In the fattening ration, corn meal is substituted for the gluten. As side lines, three or four hundred hogs per year are fed on slops and wheat middlings, a large bunch of sheep are fattened, and several thousand incubator-hatched chicks, ducks and other birds are reared. Taken all together, the farm afford an excellent and instructive example of specialized agriculture.

#### SEND RICH CREAM.

It pays to send rich cream to the creamery. Cream is not paid for by weight, but according to the amount of butter-fat contained in it, as determined by the Babcock, or, in certain creameries, by the antiquated oil-test churn. All cream is composed of two general substances, butter-fat and milk serum (skim milk). The more butter-fat and the less milk serum a patron can manage to deliver to his creamery, within reasonable limits, the better he is off. He has more skim milk to feed, and there is less weight to haul or ship, as the case may be. It is economical to skim a rich cream. It should never test less than 30 per cent, and 35 or even 40 per cent, is better. Keep as much of the skim milk as possible at home.

The New Zealand Dairyman has an illustration showing a small flat car on a narrow steel track, used, presumably on a large farm, for trucking milk from shed to milk-house. On some farms in America an overhead cable is employed for the same purpose.

#### POULTRY.

The poultry products of the United States are worth more than the wheat, and perhaps as much as the hay, produced in the Republic.

#### CHICKENS IN COLD STORAGE.

It is well known that there is an advantage in chilling poultry or meat as soon as possible after killing. These products are actually improved in flavor by being kept for a few days at a temperature a little above the freezing point. But, of late years, the keeping of dressed poultry in cold-storage has increased to such an extent that it seems as if almost every chicken that passes through the hands of dealers was kept in a frozen condition for a shorter or longer time before reaching the consumer. In order to meet the demand for products out of season, and to secure the greatest profit by selling when the market is shortest, a system of refrigeration has been built up, in the United States especially, under which food products are kept for months, and even years, and then offered for sale, without any label to distinguish them from fresh goods.

It is the contention of many that there is practically no alteration in meats or poultry when kept in a solidly-frozen condition, no matter how long the period may be. Others assert that, beyond a certain limit of time, variously estimated at from three months to a year, cold-storage foods are unfit for human consumption.

Investigations into this question have been conducted by the United States Department of Agriculture, the results of which are published in the Yearbook for 1907, recently issued. Chickens stored for periods varying from a few days to several years were examined. Contrary to the statements generally made by the trade, there have been noted marked differences between fresh and cold-storage chickens, which difference are, apparently, progressively dependent upon the time of storage. Microscopic examination reveals changes in the muscle fibres, even after short periods of storage, while alterations in the color and texture of the chicken are apparent to the ordinary observer after a few months.

In a chicken freshly killed, the skin is of a pale, soft yellow, without any tinge or suggestion of green, and translucent enough to show through it the delicate pink of the muscles underneath. The color of the fat is a light canary yellow, exceedingly transparent, and with no tint of green. A chicken kept for ten months, while the exterior was somewhat dried, and skin less transparent than if fresh looked to be still a good, palatable bird. Closer examination showed that the muscles were soft and easily torn, and had darkened in

color. The fat, also, had turned a deeper yellow, and become more opaque. Some were examined which had been stored for two years, and in these the changes were so marked that even the most casual observer could not fail to notice them. The odor was unpleasant, though not putrefactive until after a few hours' exposure to air. Chickens in storage for three years showed up much worse than those of two years only. The most striking difference between these and the others examined was in the inflexibility and general green tint of the skin. The odor was not that of putrefaction, but was of a sharp, penetrating, biting, unpleasant character. On the inner part of the thigh, the soft salmon pink of the fresh muscle was succeeded by colors varying from a deep brown to bluish-red, and the bands of fat between the muscles were of a deep brown-orange color. The viscera had so softened that even the slightest touch would cause them to seemingly melt, and they had turned many-hued, green predominating.

After the results of this inquiry, the question is not "Do changes take place in poultry in cold-storage?" but whether such changes are not responsible for some of the obscure intestinal disorders which afflict the dwellers in large cities?

#### THE FARM BULLETIN

##### FAIR DATES FOR 1908.

- Sept. 11th to 19th.—Western Fair, London.
- Sept. 12th to 19th.—St. John, N. B.
- Sept. 15th to 17th.—Guelph Central.
- Sept. 18th to 26th.—Ottawa Central.
- Sept. 21st to 25th.—Sussex, N. B.
- Sept. 22nd and 23rd.—St. Thomas Horse Show, St. Thomas, Ont.
- Sept. 22nd to 25th.—Charlottetown, P. E. I.
- Sept. 29th to Oct. 3rd.—New Westminster, B. C.
- Oct. 8th and 9th.—Kilsyth Agricultural Society, Kilsyth.
- Nov. 28th to Dec. 10th.—International Live-stock Exposition, Chicago.
- Nov. 30th to Dec. 3rd.—Maritime Winter Fair, Amherst, N. S.
- Dec. 2nd to 10th.—National Dairy Show, Chicago.
- Dec. 7th to 11th.—Ontario Provincial Winter Fair, Guelph.

## Issues Completed at the Canadian National.

Another page of exhibition history is written full and turned—an important and significant page. It is significant, first of all, as indicating a rallying spirit of industry and commerce, but doubly significant as illustrating how little affected, comparatively speaking, is the agricultural population by the vicissitudes of speculation and finance. The secure prosperity of agriculture was the dominant note throughout. It was manifested in the scale and quality of the agricultural and live-stock exhibits, as well as in the attendance, which exceeded all expectations. Canadian industry has renewed reason for self-congratulation that it is founded on the bed rock of a stable and progressive agriculture.

Last week we reviewed the exhibits of dairy breeds of stock and dairy products. The rest of the story is not less encouraging. It is told with pen and camera by our representatives, who have reviewed the successive departments at first hand on the ground.

#### THE BEEF BREEDS.

The beef breeds, numerically, were represented quite as strongly as usual at this exhibition. Shorthorns leading largely in numbers, Herefords and Galloways holding about the same relative position as formerly, and the Aberdeen-Angus contingent considerably increased in numbers, while in all the breeds the character of the cattle in type and quality was well up to the standard, and with very few exceptions they were brought out in fine condition.

#### SHORTHORNS.

The individual entries in the Shorthorn class totalled 166, the largest number in any of the breeds present, and were selections from over twenty herds, including those of Sir Geo. Drummond, Beaconsfield, Que., the Little Missouri Horse Co., Meadville, Pennsylvania, and the following Ontario breeders: W. C. Edwards & Co., Rockland; John Gardhouse & Son, Highfield; W. R. Elliot & Son, Guelph; W. G. Pettit & Son, Freeman; J. A. Watt and J. Watt & Son, Salem; H. Smith, Exeter; Kyle Bros., Ayr; J. E. Mitchell, Burlington; T. E. and G. C. Pearson & Sons, Elderton; Douglas Brown, Ayr; J. E. Fairman, Maple Lake; Geo. Amos & Son, Meadville; A. Duncan & Son, Carluke; Eastwood Bros., Toronto; Jas. Leask, Greenbank, and others. The quality was first-class throughout, and in the grand class of Mr. W. D. Platt, of Hamilton, the following were selected

his interesting and successful experience in past years in importing, breeding and exhibiting high-class Shorthorns eminently fitting him for the work; and we believe it is safe to say that on no previous occasion at a Toronto exhibition were the awards made with as general satisfaction to exhibitors and onlookers alike, while the promptness and expedition with which the placing was done commanded the admiration of all concerned, and contrasted pleasingly with the tediousness of the old-time two or three judge system. The prizes were more widely distributed than usual, and a pleasing feature was the prominent position attained in the winnings by young breeders or those not formerly venturing into the competition at the large shows. The female classes were particularly strong, relatively more so than the bulls, though there were outstanding animals in all sections, and the average quality was higher than for many years. The aged-bull class, it will be observed, was well filled, when were forward such notable winners as W. C. Edwards & Co.'s Bertie's Hero, and J. A. Watt's Jilt's Victor, while the Little Missouri Co.'s Sidelight, a light roan, three years old, bred by Frank Harding, of Wisconsin, a bull of fine type and quality, made the issue exceedingly interesting, capturing the first award, the other two following in the order named. The two-year-old section brought out the surprise of the class, in the beautiful and bountiful rich roan, Royal Chief, bred by R. A. & J. A. Watt, and owned since he was nine months old by A. Duncan & Son, showing for the first time at a Toronto exhibition, and winning with their grandly-fitted entry, not only first in his class, but also the major and grand championship honors; and seldom if ever has been seen here a bull so free from faults in conformation, character and quality; nor had he by any means a walkover in his class or the championship contest, Elliot & Son's red Rose Victor making a very strong competitor in the class, combining character and uniformity of make-up in a high degree, while Sidelight, and Eastwood Bros.' first-prize senior yearling, Gallop Sailor, proved stubborn claimants for premier honors. The junior yearling section furnished a worthy first in Pettit & Son's white Silver Prince, a worthy son of Imp. Prime Favorite, their grand champion at Toronto last year. In a grand class of 19 senior bull calves, perhaps the most uniformly meritorious ever seen here, White Bros. young breeders, won out worthily with the level, low-set, deep-bodied red, Isandford's Clarence, bred by Imp. Bateson, Class B.

In a strong class of cows over three years, first place was taken by the notable champion heifer of former years, Queen Ideal, now in her five-year-old form, and owned by Sir George Drummond, Matured, and after an extended successful showing career, she holds her smoothness, sweetness and superior quality of flesh admirably. Bred by a comparatively obscure young breeder, she and her own sister, Fair Queen, also a champion of the breed, together with the grand champions, male and female, of this great show, furnish fine evidence of the possibility of young breeders holding their own with the veterans in producing the highest class of animals. In a good class of half a dozen cows under four years in milk, dairy qualities to be considered, the dual-purpose cow was shown to considerable advantage, several of the entries carrying well-formed udders of good size, while in conformation, if less highly conditioned, they would fit in with the dairy type very creditably, Elliott & Son, of Guelph, winning with a Cruickshank Cecilia, that speaks well for the dual-purpose claim of the breed. J. A. Watt brought out a surprise in the two-year-old heifer section, in the grand red, Mina Princess, by Whitehall Count, a heifer of remarkable smoothness of form and flesh, practically faultless in her entire make-up, as may be surmised from the fact that she conquered Queen Ideal in the senior championship contest, though she met her Waterloo in the grand championship struggle with Amos & Son's first-prize senior yearling, the red Pleasant Valley Jilt, bred by the exhibitors, and sired by the former Toronto grand champion and matchless heifer-getter, Old Lancaster (imp.); dam Imp. Scottish Queen. Straight-lined, deep-ribbed, wide-smooth, and well-fleshed, she carries herself like a queen, and fits no place but the first in any competition, while her half-sister, by the same sire, the white Lancaster Bud, second in the same class, is close to the same pattern in all but color. After winning first for both exhibitors' and breeders' young herd for best four calves bred by exhibitor, for best two animals produce of one cow, and for best three the progeny of one bull, the set of Old Lancaster, one can heartily sympathize with the pathetic remark of the senior Amos at the close of the contest—"he died too soon"—a fitting epitaph for a monument to departed worth, but he lives and will live in his descendants.

The younger classes, so uniformly meritorious, speak well for the future of the red, white and roan.

The winnings in detail are as follows: