

likely to be but as quan- of milking dur- characteristics of icipate a yield ed for, of from en months, in- at five years ne thousand ve them ex- y, their yields up. It is diffi- e, in 1880 the 04 pounds of of Aggie com- le; extraordi- were taken to of doubt as to e record, and ear was 26,- ver, the aver- be well satis- dairy animals im an average ousand pounds he need have of obtaining tured Holstein

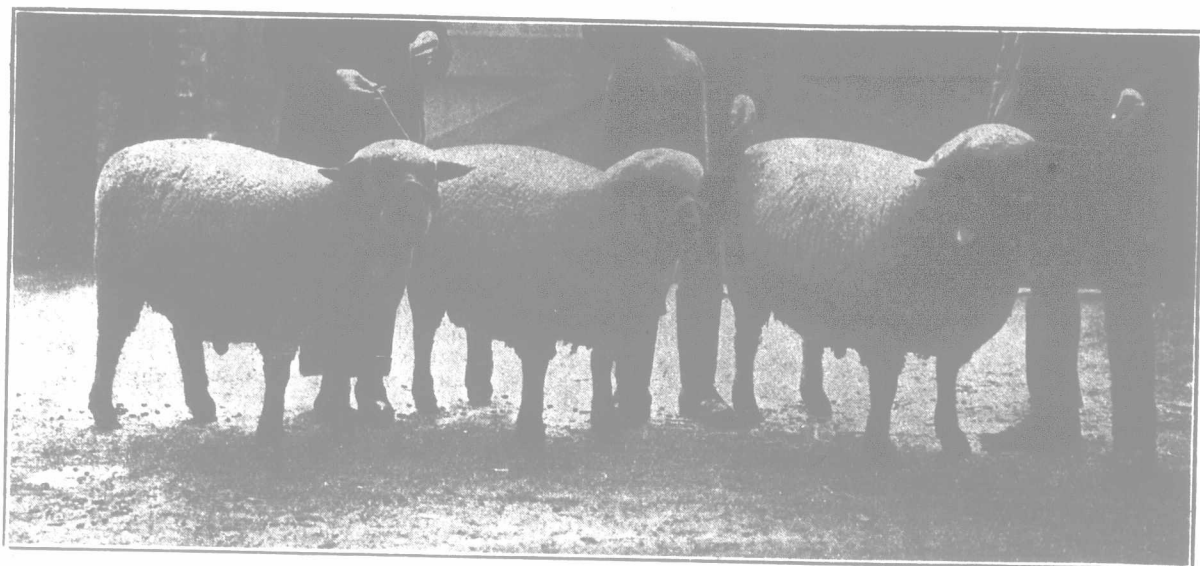
public atten- dairy quali- a breed during m- plished by public milk the publishing d performance esers required consequently ation, at their g, decided to egistration of known as the it. Canadian ord test, are , the date of and date of antity of milk

inspection of of an agricul- tion. The in- person assist- er of the ani- pping affidavit or justice of sidered abnor- made under the he expense of

to seven-day ve conducted a her length of cessful seven- animal given r seven-day eight months calving, in the lactation pe- providing her on conforms rules govern- e test. is gratifying e that Cana- breeders gener- taking ad- ge of the Re- Merit test op- ities, and, al- the stand- et for the dif- ages are quite the Holstein- n cow, under eatment, easi- mplies the

1907 the As- on decided to the proposi- f the Domin- epartment of lture, and es- , in addition al 7-day or 30- same as other ublishing thus duction made ests. While ntee the re- onditions are duction are October, 325 Record of Per- dy qualified, and fulfilling

association has, ly encouraged h the result eords of per-



Hampshire Down Yearling Wethers.

First in class, and grand champion pen, Smithfield Fat-stock Show, 1909. Bred and exhibited by James Flower.

formance have been registered. The Superintendent of Advanced Registry, in his report to the annual meeting, in June last, stated that the list of cows having produced in excess of 24 pounds butter-fat in seven days then numbered 34, while 41 full-aged cows appear in the prize-list of the seven-day division, the last of which has a fat production of 21.184 pounds. And in the 49 heifers appearing in the junior two-year-old class, all show a production in excess of 13.9 pounds butter-fat. Furthermore, the report shows that, during the past fiscal year, 2,351 animals tested under the Advanced Registry, of which one-half were heifers with first or second calves, produced, in seven consecutive days, an average of 395.2 pounds milk containing 13.681 pounds butter-fat; equivalent to 56.5 pounds, or 27 quarts of milk, and 16 pounds of the best commercial butter per week.

It is safe to say that no other breed of cattle has made a record nearly equal to this for so large or nearly so large a number of tested cows in one year; while, for a single cow's record in a year's test, that of Colantha 4th's Johanna, namely, 27,432 pounds milk, and 1,164.64 pounds butter, and that of Grace Payne Second's Homestead, of 35.55 pounds butter in seven days, and 134.43 pounds butter in 30 days, stand out in bold relief as unprecedented and unequalled.

### Winter Steer-feeding.

For the past four years the Indiana Agricultural Experiment Station, at Lafayette, has conducted experiments in steer-feeding, and published the results in bulletins issued yearly. In bulletin 136, issued lately, the details are given of experiments carried on last winter, beginning Nov. 17th, and continuing for six months. The object of this work was to obtain additional information on the following problems in feeding beef cattle: "The Influence of Age on Economy and Profit in Fattening Steers in Winter"; "Corn Silage as a Roughage in Fattening Two-year-old Steers"; "Cottonseed Meal as a Supplement to Corn in Fattening Two-year-old Steers"; and, "Results of Short vs. Long Feeding Periods."

It is pointed out that conditions in Indiana last fall were so unfavorable that many feed-lots were allowed to remain empty during the winter. The summer of 1908 was one of prolonged drouth, resulting in thinner grass cattle, and poor yield and high price of corn. The experimenters, in common with other feeders, had to face these unfavorable conditions, and yet they are able to report that a reasonable profit was secured from all lots of cattle used in the experiments.

The manner of cattle-fattening—about the same as carried on by the ordinary Indiana feeder—differs very materially from that pursued by Canadian feeders, but, from the conclusions arrived at, helpful information may be gained by those in the business on this side of the line. All cattle were fed in open lots, 40 x 50 feet, with an open shed, 10 x 40 feet, on the west side of each lot. The sheds were kept well bedded, but the lots, the winter being mild and rainy, were muddy almost the whole time. Corn and meal were fed in troughs in the yard twice a day, roughage in racks. Differing from the practice of some feeders in the corn belt who keep grain continually before fattening cattle, only as much concentrated food was given as would be cleaned up in three quarters of an hour. Water could be taken at will.

The cattle consisted of calves, yearlings and two-year-olds, all high-grade Angus, of good quality.

The values placed upon the animals both at the beginning and end of the feeding period were what skilled marketmen from two leading firms estimated them to be worth at prevailing prices. Summary conclusions in full are as below:

#### SUMMARY

The amount of feed consumed, daily gain, cost

of gain and profit per steer increased with the age of the cattle.

Two-year-old cattle, placed in the feed-lot in equal condition, and given a full feed, attain a higher finish during a six months' feeding than either yearlings or calves.

The margin between buying and selling prices of yearlings and two-year-old steers was \$2.25 per hundred; of calves, \$2.00.

An increase of 10c. per bush. in the price of corn required a corresponding increase in the selling price of two-year-olds, 41 cents per hundred; of yearlings, 42 cents per hundred; of calves, 40 cents per hundred.

An increase of 50 cents per hundred in the original cost of cattle required an increase of 29 cents per hundred in the selling price of calves, 31 cents in that of yearlings, and 35 cents in that of two-year-olds.

The amount of capital required to handle the same number of cattle increases with their age.

The amount of pork produced from the droppings increased with the age of the cattle.

The price received per bushel for corn was 78.1 cents when fed to calves, 78.6 cents when fed to yearlings, and 79.3 cents when fed to two-year-olds during the winter of 1908-9. The profit per head was \$6.73 on calves, \$10.84 on yearlings, and \$12.79 on two-year-olds from a six-months' feeding period.

The profit per dollar invested in cattle, hogs and feeds for six months was 12.5 cents in feeding calves, 13.7 cents in feeding yearlings, and 12.5 cents in feeding two-year-olds.

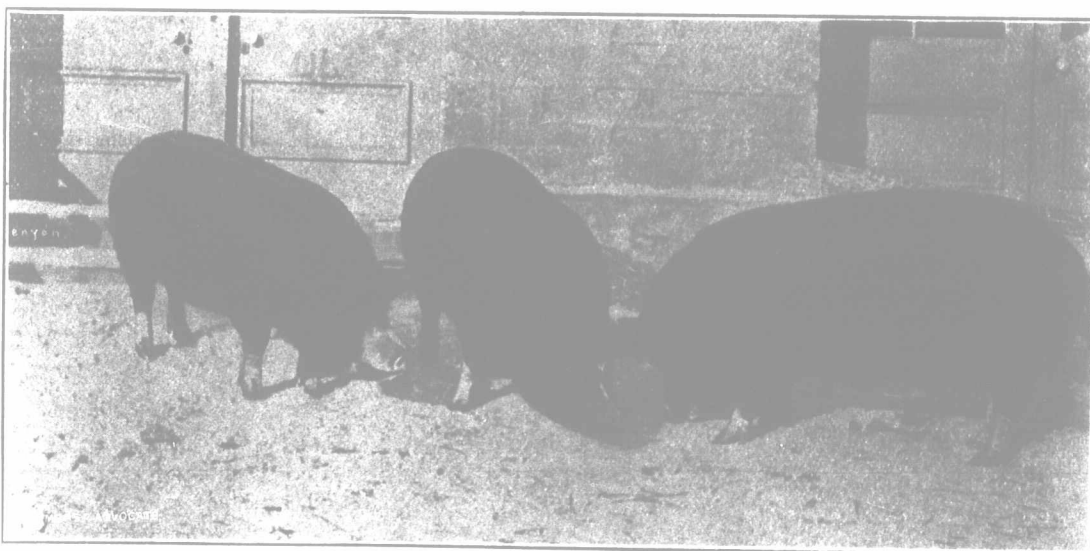
A ration of shelled corn, cottonseed meal and corn silage, without hay, proved to be the most efficient ration tested for fattening two-year-old steers, as shown by the rate of gain, cost of gain, and finish of the cattle.

The addition of corn silage to a ration of shelled corn, cottonseed meal and clover hay, resulted in a more rapid and cheaper gain, and a higher finish on the cattle.

Corn silage has a beneficial effect in causing cattle to shed their winter coat earlier than those receiving the same ration without the corn silage.

When corn silage is used, there is a smaller consumption of grain than where it is omitted from the ration.

The addition of cottonseed meal to a ration of shelled corn and clover hay resulted in a more rapid and cheaper gain, a higher finish, and a greater profit per steer.



Pure-bred Berkshires.

First prize in their class for three of one litter, first and second for sows and second for barrow six months and under nine, Ontario Winter Fair, Guelph, 1909. Exhibited by W. W. Brown-ridge, Ashgrove, Ont.

The steers receiving cottonseed meal and corn silage fattened more rapidly, required less feed in producing a pound of gain, attained a higher finish, distributed the fat more evenly over the carcass, had a higher market value, and returned a greater profit per head than similar cattle fed without using these feeds.

The price received during the winter of 1908-9, per bushel of corn, fed in connection with clover hay, was 73.1 cents; in connection with clover hay and cottonseed meal, 79.3 cents; in connection with clover hay, cottonseed meal and corn silage, 85.8 cents; and in connection with cottonseed meal and corn silage, 96.7 cents.

"Short-fed" cattle consume a greater proportion of concentrates to roughage than "long-fed" cattle.

"Short-fed" cattle make a greater daily gain per head, at a smaller cost per hundred, than "long-fed" cattle.

A greater margin is necessary to insure a profit from a feeding period of 180 days than from one of 120 days.

The margin necessary to prevent loss on "short-fed" was \$1.41 per hundred; on "long-fed" cattle \$2.07 per hundred.

During the period when both lots of cattle were in the feed-lot there was a greater profit from feeding heavy, fleshy feeders than from feeding lighter and thinner cattle. When the lighter cattle were fed two months longer, the profit per head, and also on the investment, was practically the same.

The corn fed to "short-fed" cattle had a feeding value of 80.3 cents per bushel, or 25 cents more than the market value when fed; that fed to the "long-fed" cattle, a value of 79.3 cents, or 20.5 cents more than market value when fed.

Special attention may be drawn to the fact that, while, as is pointed out in the bulletin, it is more profitable for the man who raises his own steers to fatten them before they reach the age of two years, yet, for the feeder who buys in his cattle, animals of greater age are often more profitable. Also, to the conclusions that the addition of cottonseed meal to a ration of shelled corn and clover hay resulted in a more rapid and cheaper gain, a high finish, and a greater profit per steer, and that when silage was further added to the ration the result was a still more rapid and economical gain and higher finish than before.

### Sheep at Our Agricultural Colleges

Editor "The Farmer's Advocate":

The system of keeping a couple of breeds of sheep, as carried on at the Guelph and Macdonald Agricultural Colleges, is not, according to my way of thinking, either in the best interests of the students, nor of the sheep-breeding industry of Canada. What is the first impression the student, inexperienced in sheep-breeding, is likely to form when he enters the sheepfold at the College? Is it not that these are the principal breeds. I care not what breed or breeds he may find there, it is quite natural that he would expect they were the best. It has often been said it is next to impossible to keep a breeding flock of all the mutton breeds on one farm, with any degree of success. With this I heartily agree, but is there no other plan that could be worked out, so that the students would have an opportunity of studying the characteristics of each breed, so that they could go into a college judging competition, such as is held every year at the International (Chicago), upon at least an equal footing with the other college teams? This alone would be of great value to this banner sheep-breeding ground of North America. It would also be of manifold benefit to our college professors, who are most capable, if we only put the material in their hands to teach