



UNIVERSITY OF ILLINOIS

Agricultural Experiment Station

URBANA, JANUARY, 1908

CIRCULAR NO. 114

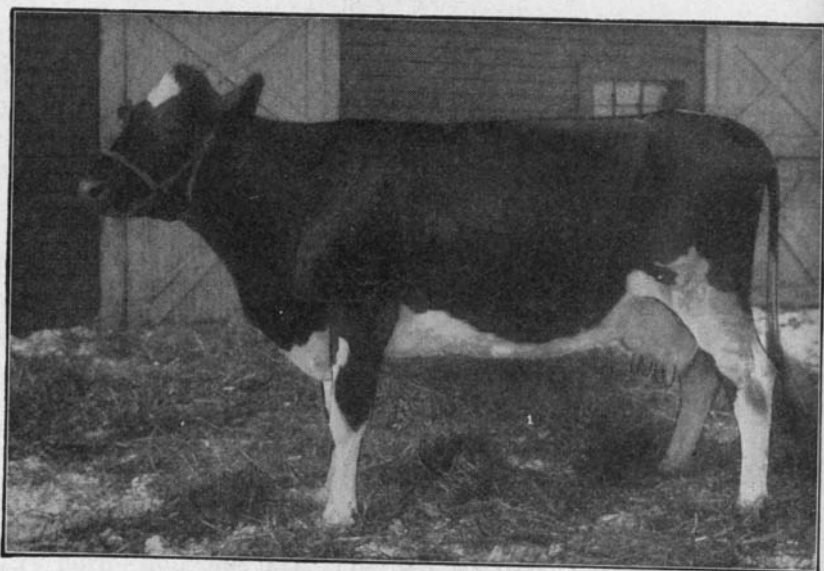
THE PROBLEM OF THE POOR COW

BY WILBER J. FRASER, CHIEF IN DAIRY HUSBANDRY

THE GREATEST PROBLEM IN ILLINOIS DAIRYING TODAY.

COMPLETE RECORDS OF TWO COWS COMPARED FOR THREE YEARS; ONE PRODUCES NEARLY TWICE AS MUCH MILK AS THE OTHER WITH THE SAME CARE AND FROM THE SAME QUANTITY OF FEED.

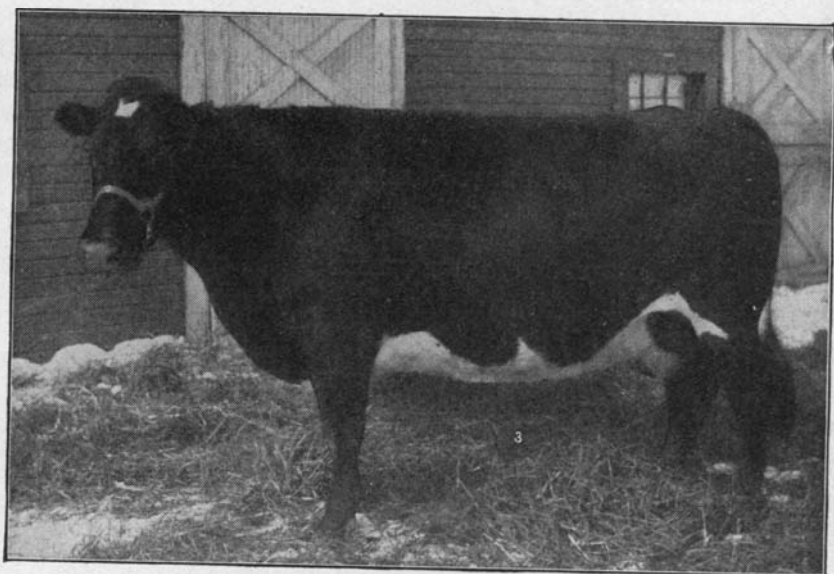
HERD OF 1,021 COWS ARE BROUGHT HOME TO THE DAIRYMAN WITH A STRANGE BUT TRUE STORY OF FALSE PRETENSES IN THE MILK BUSINESS.



Cow No. 1.—Average record for three years, 11,390 pounds of milk; 405 pounds butter fat.

From the same kind and amount of feed, this cow produced 1.88 times as much butter fat as cow No. 3.

Returns a profit of \$34.50 per year.



Cow No. 3.—Average record for three years, 3,830 pounds of milk; 138 pounds butter fat.

Lacked \$5.62 per year of earning her board.

At the Agricultural Experiment Station are two cows whose records are well worth studying. They were bought from the same dairy herd near Elgin, Illinois, and both were selected for good producers. But here at the University, with the very same care and opportunities, they have shown a great difference in production.

All the milk of these cows has been weighed and tested for three years. A record has been kept of every pound of feed consumed by each animal, both summer and winter. Each year Cow No. 1 produced on the average 11,390 pounds of milk containing 405 pounds of butter fat, but during the same time Cow No. 3 averaged only 3,830 pounds of milk containing 138 pounds of butter fat.

259 *vs.* 138 POUNDS OF BUTTER FAT FROM THE SAME QUANTITY OF FOOD

These cows were given the same kinds of feed and in amounts according to their capacities to consume it. Cow No. 1 ate 1.56 times as much as Cow No. 3, but produced 2.97 times as much milk and 2.93 times as much butter fat. Or reduced to a like feed basis, No. 1 produced 1.88 times as much as No. 3. Each year, No. 3 produced only 138 pounds of butter fat from the same quantity of food that No. 1 changed into 259 pounds of butter fat. Equal amounts of feed made in the one case 188 pounds of fat, in the other only 100 pounds. The one cow is nearly twice as good a producer as the other from the same kind and amount of feed. But the difference in profit is far greater than this difference in production.

\$34.50 PROFIT *vs.* \$5.62 LOSS

Counting the butter fat at 23 cents per pound, one cow returned \$93.07 and the other \$31.74 per year. Taking out the known and exact cost of feed in each case, the one cow brought in a profit of \$34.50 per year, and the other lacked \$5.62 of paying for her board at market prices of feed. Forty such cows as No. 1 would return a dairyman a profit of \$1,380 per year.

This comparison, exact and complete for three years and including the record of both milk and feed, means a great deal more than a single year's comparison or one in which it is necessary to introduce an estimate.

A STRIKING SIX-YEAR COMPARISON

Another similar comparison between two cows at the Agricultural Experiment Station, is to be found in Rose and Queen. For twelve consecutive years Rose gave an average of 7,258 pounds

of milk, containing 360 pounds of butter fat per year, while the eight years' record of Queen showed only 4,591 pounds of milk, containing 158 pounds of butter fat, per year. Rose produced upon the average two and one-third times as much butter fat as Queen every year.

GREAT DIFFERENCES GENERAL, NOT EXCEPTIONAL

In eighteen dairy herds in one section of Illinois, containing 323 cows of which this Station made a full year's individual test and record, there were fifty-two cows every one of which was as poor or poorer than No. 3, and there were forty-three that produced 280 or more pounds of butter fat each. The poorest fifty cows in these 323 averaged only 116½ pounds of butter fat for the year, while the best fifty averaged 319 pounds of butter fat. The best fifty produced 273 pounds fat for every 100 pounds produced by the poorest fifty,—a difference of nearly three to one.

WHEN THE COWS COME HOME

On the opposite page are 1021 cows brought home to the dairyman. He may not at first recognize any of them as having strayed from his farm, and he may not be pleased with the herd as a whole, but for all that they are common cattle in Illinois, and he is an exceptional dairyman who cannot claim a number of them as his own. These cows do not usually stray away from the farm in such numbers as this (more's the pity), and the writer's reason for bringing them home in this way is not so much to restore property as to assist them to deliver a message, which may be of more value to the dairyman than are the cows themselves.

AN UNSUSPECTED CONDITION

Dairying, when properly conducted, is one of the most profitable lines of farming. But, as a rule, the dairyman neither knows nor suspects the amount of profit or loss from each cow in his herd. Very few even set down the payments received for milk and the items of money paid out for the whole herd, to say nothing of the individual cow's record or of estimating the cost of the feed.

For several years, the Agricultural Experiment Station has been sending out men to weigh and test the milk of cows in different parts of the state, and the facts discovered are so surprising that it taxes all manner of presentation to show their bearing on the dairyman's profit.

WHEN THE COWS COME HOME

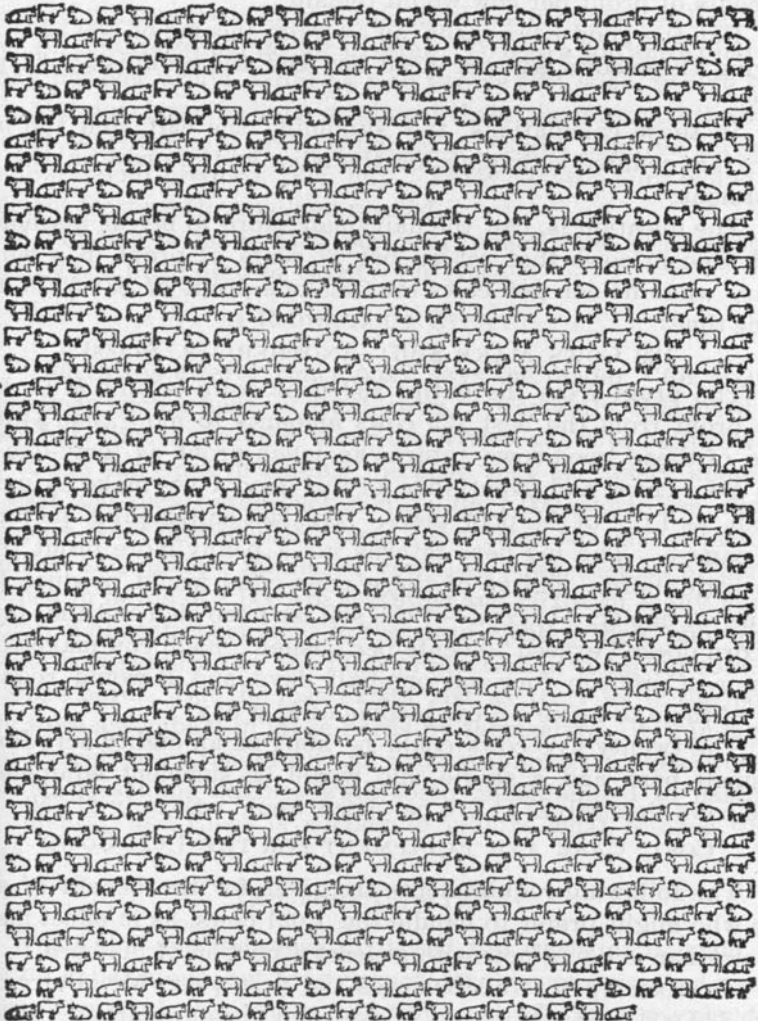
Twenty-five cows, each producing 301 lb. butter fat per year, return a profit of \$783.



This is the average production of 139 cows comprising the best fourth of 554 cows in 36 Illinois dairy herds.

The lowest fourth (139 cows) of the same 36 herds averaged 133½ lb. butter fat per year.

The picture below shows exactly how many cows of the poor kind, (1,021) it takes to return identically the same profit (\$783) as the above 25 good cows.



FULL YEAR'S TEST OF 554 COWS IN 36 HERDS

Part of the results of the above investigation are represented in a full year's record of 554 cows in thirty-six herds. To make a large and fair comparison in milk production, take the lowest one-fourth (139) and the highest one-fourth (139) of all these cows. The former averaged $133\frac{1}{2}$ pounds of butter fat, and the latter 301 pounds for the year. The Elgin price of butter the last five years averages 23 cents per pound, and this is the usual price the dairyman has received for the butter fat in his milk. At 23 cents for butter fat, the poor cows make an average return of \$30.77.

If the cost of feed be estimated as low as \$30 per year, only 77 cents of profit per cow would remain.

But the good cows made an average income of \$69.32. Allowing these cows \$38 per head for feed, the profit is \$31.32 per cow.

In these calculations, the skimmilk, the calf, and the manure are counted as paying for the labor and interest on the investment.

The question is, can the dairyman afford to invest his money and time in cows that return but 77 cents of profit in a whole year, when he can get cows that make a profit of \$31.32 in the same time?

139 COWS MAKE \$107; ANOTHER 139, \$4,000

The profit from the entire 139 poor cows is only \$107, but the profit from the best 139 cows amounts to more than \$4,000. One of these good cows returns as much profit as forty-one of the poor cows, and twenty-five of the good cows make as much profit as 1,021 of the poor cows. The last statement is pictured on page 5. The big herd returns not a penny more profit than the little herd. Thirty of these poor cows would produce the value of one acre of corn—if the soil isn't too rich and the price of corn doesn't exceed 50 cents per bushel. Each cow makes one penny of profit in four and one-half days, and it would require 474 of them to make a clear income of \$1 a day.

The twenty-five cows could be kept on an eighty-acre farm, a small barn and a single silo would be sufficient equipment. The cows themselves at \$70 per head would cost only \$1,750.

COST, CARE AND EQUIPMENT FOR THE 1,021 COWS

The following requirements are given for the benefit of any one who might prefer to handle the 1,021 cows, as in effect many a dairyman is doing now with at least a portion of his herd.

To stock up for full business the first year, Mr. Dairyman puts \$40,000 to \$50,000 in his pocket and goes to market. It will

require two trains of thirty cars each to bring home his cows. Walking as closely together as possible single file, each cow occupying but eight feet in the line, they will string out more than a mile and a half in driving up from the station. It will take almost an hour for them to pass through the gate at a steady walk. Standing as closely together as they could be crowded, they would fill two and one-half acres of yard, and a five-acre lot would be too small to accommodate them properly. A barn thirty-two feet wide, would have to be 103 rods long to house this herd. The building would extend nearly around the four sides of a five-acre lot and would cost a matter of \$40,000—but it would save fencing. Eighty-five good milkers could handle this herd easily. Fifteen hundred acres of pasture would do for grazing. To feed a ton and a quarter of hay per cow would require a rick twelve feet wide, twelve feet high, and nearly a mile long, or almost three times around the five-acre lot,—providing a great windbreak. Eight hundred acres of meadow should produce this hay. Forty 100-ton silos would be sufficient to store the ensilage needed.

All of this to make \$783 per year, exactly the same that is made by the little herd of twenty-five cows.

A RIDICULOUS STORY]

“But this is utterly ridiculous”, says the reader, “for no one would keep such a herd of 1,021 cows.” Certainly this herd is ridiculous; that is the very thing the writer wants to picture vividly to the dairymen of Illinois, because they are today keeping at least 250 such herds each containing 1,000 worthless cows. The only point on which the facts differ from the above picture is in that this quarter million of worthless cows, instead of being grouped in herds of 1,000 are scattered and mixed in many herds—some in almost every herd in the state—where their poor production is covered up by the high production of the good cows in the same herd. But the loss exists just as truly as if the poor cows were assembled in large herds by themselves. Within sight from almost every rise of ground and barnyard gate, these worthless and presuming bovines walk forth unchallenged to pasture and plenty, and there is nobody to inquire what returns they make.

IN EVERY COW LOT

Would that the nonsense of it and the waste of it could be kept on paper alone, but they cannot; for this nonsense and waste of the dairyman's investment and time and effort have extended into almost every cow-lot in Illinois. Is it any more business-

like or any more profitable per cow, to keep five, ten or twenty-five such cows that to keep 1,021 of them?

SPENDING MONEY AND LABOR FOR NAUGHT

The men who drive up the 1,021 cows and milk them on a sweltering night in flytime, would certainly realize that they were in "big business"—yet this is exactly the size of the "business" as to profit that is being done with one-fourth of the million cows in Illinois today. Isaiah's question may well be asked here: "Wherefore do ye spend money for that which is not bread (nor milk)? and your labor for that which satisfieth not?"

This herd could be managed very well on a 3,000 acre farm of good land. A dairyman having a bank account of \$100,000 or so, could keep these cows, but they would be a bit dangerous for the common dairyman to handle. But he is handling them in smaller numbers and doesn't see the danger. He doesn't even know that he has several such cows in his herd. The only way for him to find out is to weigh and test the milk of each cow. And when he finds out, there is but one remedy,—to sell these charity boarders to the butcher.

Directions for testing dairy cows are described in Circular 115.