CIHM
Microfiche
Series
(Monographs)

ICMH
Collection de
microfiches
(monographies)

Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming are checked below.

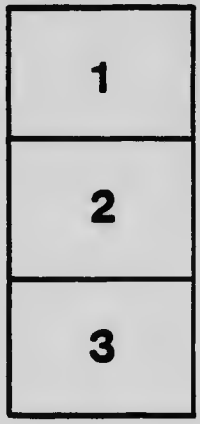
- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☐ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☐ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from filming / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- ☐ Additional comments / Commentaires supplémentaires:

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed / Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☐ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary material / Comprend du matériel supplémentaire
- ☐ Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image / Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.
- ☐ Opposing pages with varying colouration or discolourations are filmed twice to ensure the best possible image / Les pages s'opposant ayant des colorations variables ou des décolorations sont filmées deux fois afin d'obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below / Ce document est filmé au taux de réduction indiqué ci-dessous.

10x	12x	14x	16x	18x	20x	22x	24x	26x ✓	28x	30x	32x



DEPARTMENT OF AGRICULTURE

OFFICE OF THE DAIRY AND COLD STORAGE COMMISSIONER
OTTAWA, MARCH, 1913

Some Notes Gleaned from the Work of the Dairy Record Centres in 1912

(The Substance of an Address delivered by Chas. F. Whitley, of the Dairy Division, at the Dairymen's Conventions in Ontario in January, 1913).

CIRCULAR D. & C. S., No. 7

CIRCULAR D. & C. S. No. 7.

DEPARTMENT OF AGRICULTURE.

OFFICE OF THE DAIRY AND COLD STORAGE COMMISSIONER,

OTTAWA, MARCH, 1913.

SOME NOTES GLEANED FROM THE WORK OF THE DAIRY RECORD CENTRES IN 1912.

(The Substance of an Address delivered by Chas. F. Whitley, of the Dairy Division, at the Dairymen's Conventions in Ontario in January, 1913).

NOTE.—The figures which Mr. Whitley has compiled from the actual records are so striking and at the same time so instructive, that it would seem to be desirable to place them in the hands of as many as possible of the farmers of Canada who are engaged in milk production. With that end in view, a large edition of this circular is being printed for general distribution.

J. A. RUDDICK,
Commissioner.

It is beginning to be recognized more generally that a cow is kept not simply to consume roughage and concentrates but to produce milk and fat in abundance. Further, not only is a large production necessary from each, but a good profit must be made. That is the essence of modern business-like dairying. The profit made depends largely on the cow's inherent ability to convert feed into those products economically. It is evident that if the production is sixty dollars' worth of milk or fat at a feed cost of fifty-five dollars, the net profit is only a bare five dollar bill, and is not a good return for her year's work. But fifty dollars' worth of product at a feed cost of thirty dollars makes another cow with her twenty dollars profit just four times as profitable. Such study of dairy economics is only possible when dairy records are kept, and it is to this laudable end, a large profit from each cow, that the Dairy Division at Ottawa works through the recommendation of systematic cow testing, the bed-rock principle of dairy herd improvement. Our wide awake and progressive men appreciate it.

Unless the figures are actually before one, the variations in production found in the same herd is almost incredible. For instance, in three Ontario herds, the difference in yield between the best and the poorest cow, runs actually at 8,100, 9,100 and 10,900 pounds of milk; the two extremes are 3,600 and 17,615 pounds. This proves immediately that neither an occasional sample tested or pailful weighed, nor a hasty figuring of the herd's average yield can possibly give any measure of justice either to the abundant or to the economical producer, so that the knowledge requisite to building up a good herd has still to be sought. That knowledge can be found in dairy records.

The more the question of net profit per cow is looked into, the more singular are the discoveries. A common showing in many districts is that one-third of the total net profit in a herd of eight or ten cows is made by only one, the best cow. That one good cow, earning $43 profit over a feed cost of $37, sometimes makes as much profit as to combine the profit and loss of the six poorest cows. Such a heavy burden is not fair play to her.

A cow giving $41 worth of milk at a feed cost of $37 makes only $4 profit; the cow with $43 profit, noted above, makes as much profit *as ten cows* of that kind. Such comparisons abundantly prove the necessity of studying each individual. Let us cease this unsatisfactory, unenlightening talking of the herd "average." It is rabid Socialism, steamrolling to one dead level, independent of strong individuality and ability.

The following chart illustrates the startling difference between average and individual profit or loss.

WHAT PROFIT PER COW DO YOU MAKE?

Herd No.	Number of Cows.	Average Yield. Lb. Milk.	Lb. Fat.	Feed Cost.	Average Profit.
1	10	6,298	231	$40	$22.96
2	6	3,665	129	33	3.65
3	8	10,123	361	50	51.23

	Poorest Cow.			Best Cow.		
Herd	Lb. Milk.	Lb. Fat.	Profit.	Lb. Milk.	Lb. Fat.	Profit.
1	4,345	167	$3.45	7,665	275	$36.65
2	2,176	78	11.24Loss	5,360	191	20.60
3	7,672	292	26.72	17,615	619	126.15

The upper half of this table deals with averages, the lower half with individual cows.

This photograph in figures shows three herds in strong contrast. The average yield of milk in Herd 3 is almost three times that of Herd 2, but the average profit is *fourteen times* as great. That is despite the feed costing $17 per cow more.

Note the difference in the average yields of milk, from thirty-six hundred to ten thousand pounds per cow. It would be just as sensible, perhaps more so, to say that the three herds average 6,700 pounds of milk, as to say that your own herd averages so and so. We must study *individual performance.* It is just a suicidal policy to average good and poor cows, blinding ourselves to the deadening influence of low yields and invisible profits.

The average profit in Herd 2 is just one cent for each day in the year: but the individual returns vary between $11.24 *loss* and $20.60 profit. A consideration of averages without selection on records simply means stagnation.

The poorest cow in Herd 2 is a four-year-old, type of a kind we ought to be without: the searchlight of record-keeping reveals them as dangerous to dairy navigation.

The poorest cow in Herd 1 is a long way below par, or the average profit of the herd: how frightfully unfair it is, therefore, to the best cow in this herd with $36.65 profit to have the poor one hauled up to the same level in a grossly misleading "average."

Among the best cows note the excellent record of 17,615 pounds of milk from a seven-year-old grade. Even at a feed cost of $50 her profit is $126.15; or, compared with the $3.45 profit from the poorest in Herd 1, *actually 30 times as much.* The great economy of the really good cow is here manifest.

Investigation at five Centres last year showed 3,188 cows giving an average profit of only $13.28, no princely return for twelve months' work. It is such figures as these that the work of the Dairy Record Centres aims to thrust upon the attention of our dairymen, so that intelligent and rapid herd improvement may result. The Recorders, these consulting dairy specialists, are within the daily beck and call of the inquiring dairyman in their respective districts, despite distance or

weather, and absolutely free of charge. Not much wonder, surely, that there were 14 such Recorders last year in place of 6 the year before, and that more are being appointed. They bring to the farm in their capacity of dairy advisers a wealth of real encouragement, useful suggestion and practical help; each Recorder proves the value of adding figuring to farming so that a simple record may assist materially in the dairyman's main endeavor to *make each cow pay*. That is the keynote thought in the Dominion-wide chorus of cow testing.

Hence it is dawning on the indifferent patron and the sceptic that *his* is the responsibility more than the cow's, *his* brain must make deductions from his record of figures, *his* intellect must plan and guide the building and development of the profitable dairy herd. That natural right, since the beasts of the field were assigned to man's control at creation's dawn should be both his pleasure and strenuous aim to-day.

The Recorder, the man with a mission, shows that each individual cow has a mission; not simply existence at the expense of her unsuspecting owner, but the making of a handsome profit. Thus, farms and districts are now in the transition stage from general to special purpose animals. Record sheets and sample bottles are giving each cow a square deal where before simply reigned mere guess work, palpably unjust to the aristocratic producer as well as to the habitual loafer. Fresh energy and determination are manifest as the benefits of a simple business proposition are taken to heart. Out of chaos and confusion of ideas, evolve order, system, satisfaction and profit.

The unmasking of some poor cows, shirkers of their responsibility, does not condemn dairying as a business, nor lead to gnawing misgiving of a dairyman as to his chosen vocation; but, on the contrary, such knowledge has fired a spirit of hopefulness and determination to improve. Really good cows, some where least suspected, have been found, and their discovery has proved an incentive to even bigger things accomplished. Here we have real valuable education, intimate first-hand analysis of immediate surrounding conditions with the drawing out of the owner's best ideas of progress and attainment.

Our Recorders found an average of nine cows kept per hundred acres of land. How many acres on your farm does it take to feed one cow? The profit might be increased immensely if the productive capacity of the land were so improved as to support more cows. On some farms visited only 150 pounds of milk were being produced per acre; while on others the production was as high as 1,750 pounds per acre.

The average cost of feed per hundred pounds of milk was found by our Recorders in some cases to be as low as 54 cents for the average of the herd, while in others the average cost from unselected herds was as high as $1.37 per hundred. If individual cows were considered of course these prices would vary still more. No stronger proof could possibly be wanted for the absolute necessity of weeding out, after consulting their records, those cows whose milk costs too much to produce. In probably no other manufacturing industry would cost prices vary in such extraordinary degree. Nothing else but simple record keeping will detect these drones in the hive of dairy industry. Records thus prove themselves a valuable "first aid" to farmers injured by keeping poor cows; they assist to eradicate from the blood of the average man the poison of loose, indifferent ideas of dairying. They inoculate with the microbe of progress, and become serviceable dairy cultures, improvement "starters."

Glancing at all our records in Ontario for last year, the average yield of 3,387 cows was found to be 6,132 pounds of milk, 3.4 test, and 211 pounds of fat. To illuminate the difference in profit per cow, even with such an apparently satisfactory average yield, I separated carefully the yields of the 300 poorest cows and the 300 best cows. This chart shows one or two startling facts. Please observe these are not imaginary, theoretical or experimental results; they are actual dairy records given us by the men who milk and feed the contrasted cows. They are indicative of the severe handicap of the average farmer with only average cows, and prove what a perfect food, as well as tonic, records may be to the average man whose ideas on cow testing remain half starved and undeveloped.

Contrast of the Poorest and Best Cows.

AVERAGE YIELD.

3,387 Cows, Ontario.
6,132 lbs. Milk.
3.4 Test.
211 lbs. Fat.

THE 300 POOREST COWS.

Yield..	$33.33
Feed..	33.00
Profit..	.33 cents.

The Best 1-10th, or the 300 Best Cows.

Yield..	$104.33
Feed..	40.00
Profit..	$64.33

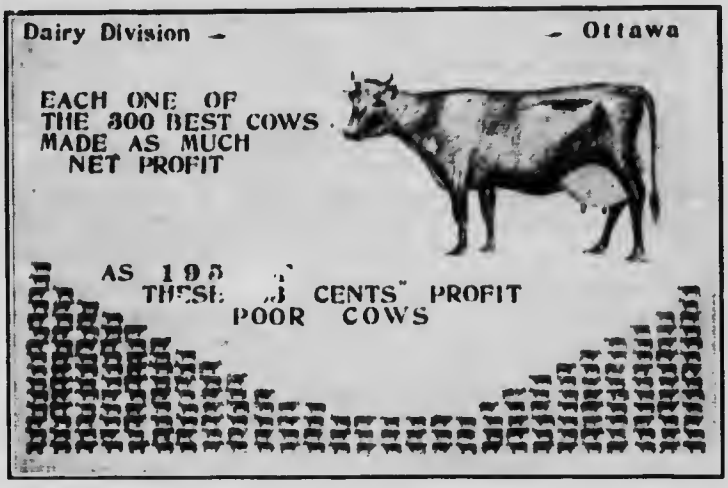
NOTE.—The 300 Best Cows gave more Milk than the 300 Poorest by 2, 130, 900 Pounds.

It took scarcely one-third of the 3,387 cows to give one-half of the total yield of milk. That is, we are keeping 16 cows to do the work of 10! It would need a milk vat three times as long as that required for the poor yield, to hold the average yield of the "best" cows. Note that the feed cost of the poor cows has been placed at only $33.00, though our lowest average cost at a Record Centre was $33.21, which would cut even this small profit of 33 cents still lower.

Then look at this fact, that even charging the good cows with feed at $40, they made a profit of $64.33, or compared with their poorer sisters, *195 times as much*.

If these 300 poorest cows had given as much milk as the 300 best cows, there would have been an additional income from them of $21,309.00.

In order to impress the relation between the profit of only 33 cents from the poorest cows and the profit of $64.33 from the best cows, I have translated that relative value into the following diagram.



This knowledge should induce action, otherwise it is a golden opportunity wasted. Each year brings new benefits; to ignore them is to deprive one's self of the best that life offers. A man proves himself by his acceptance or rejection of the world's knowledge and progress. Hence the real dairyman should be found on the crest of each wave of advancement. Cow testing must commend itself to the thinking man; it is no fad, but has itself been tested and tried out in the hard crucible of actual farm experience.

The more that cow testing is studied the brighter is the outlook. Correspondence and conversation with our dairymen show not only how eagerly some men thirst for knowledge, but how it has been acquired through a study of dairy records. As the cow impresses her needs on the mind of her owner, he reaches out for more information on the best dairy practice regarding suitable and better field crops, improved conditions in the stables, and better products. Records stimulate his best and constant endeavours and achieve excellent results the whole Dominion over. Some Ontario increases in yield directly traced to cow testing are tabulated here.

WHAT COW TESTING ACHIEVES.

Some Ontario Increases after Three Years.

Herd at	No. of Cows.	Present Yield Lbs. Milk.	Increase per Cow. Lbs. Milk.	Per Cent.
Wincher	14	8,314	1,027	14
Bongard	18	7,380	1,041	16
Brunner	11	7,306	1,719	30
Wooler	10	7,640	2,313	43
Kerwood	10	6,770	2,580	60
Hertle	4	6,326	2,560	68

An average increase easily obtained is 1,100 pounds of Milk, 40 pounds of Fat per cow.

Ontario has 1,044,000 cows; at only $10 each the increase might be over *Ten Million Dollars*.

These are herds that records are building. Meditation on the benefits of cow testing has crystallized into action. Cents are sown and dollars reaped.

If all our dairy cows in Canada could be educated to yield only ten dollars worth of milk more than they do now, the *extra* revenue from just the present number of cows would be almost *thirty millions of dollars*.

Each herd in this table may be considered to be giving a satisfactory present yield of milk as found in the second column, but the beauty of cow testing is that when once radical improvement has commenced there is no curb placed on a man's ambitious ideas. Contented he may be now with 6,326 pounds of milk as an average yield per cow, but he is still in the running for a higher record.

Similarly these records of seven and eight thousand pounds may be expected in a year or two to be overshadowed by the substantial figures of 10,000 pounds per cow.

Such percentage increases as 43, 60 and 68 are worthy of more than a passing reference. They should arrest the attention of every business man, indicating, as they do so strongly, no panning out of distant mines or slumps in real estate, but almost unsuspected possibilities in undeveloped resources on old Ontario farms. Few amongst our merchants realize a 60 per cent. increase of output in three years, yet such tangible results, and even greater, are obtained on scores of farms. In addition to this, it is well to bear in mind that as expenses do not increase in anything like the same ratio, the net profit per cow bounds up in remarkable degree.

Taking the Kerwood herd, for instance, the original yield of milk was 4,399 pounds; at a feed cost of $40 the profit was $3.90. Even allowing $45 worth of feed now to produce the present yield, 6,770 pounds of milk, the net profit is $22.70. Thus while the increase in milk yield is 60 per cent, **the increase in profit is 482 per cent.** Such figures would not be indifferently received by any mercantile firm and should appeal forcibly to every philanthropic dairyman who is at present boarding the "33 cent cow" referred to above.