

**CIHM  
Microfiche  
Series  
(Monographs)**

**ICMH  
Collection de  
microfiches  
(monographies)**



**Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques**

**© 1998**

The In  
copy a  
may be  
the in  
signific  
checke

C  
C

C  
C

C  
C

C

C

C  
E

C  
P

B  
R

O  
S

T  
in  
l'o  
in

B  
w  
o  
b  
a  
p

A  
C

A  
C

A  
C

A  
C

A  
C

This Item  
Ce docum

10x



The copy filmed here has been reproduced thanks to the generosity of:

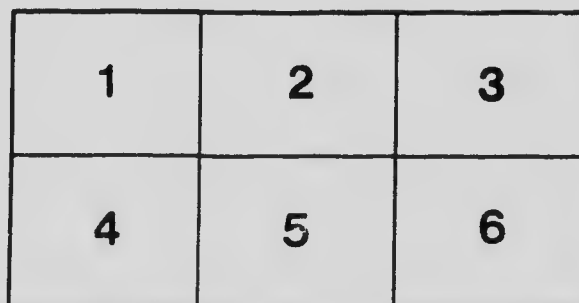
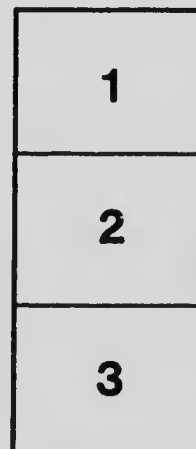
Library  
Agriculture Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche sheet contains the symbol  $\rightarrow$  (meaning "CONTINUED"), or the symbol  $\nabla$  (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Bibliothèque  
Agriculture Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

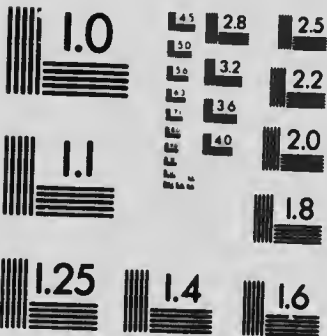
Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par la première page et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par la seconde page, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole  $\rightarrow$  signifie "A SUIVRE", le symbole  $\nabla$  signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

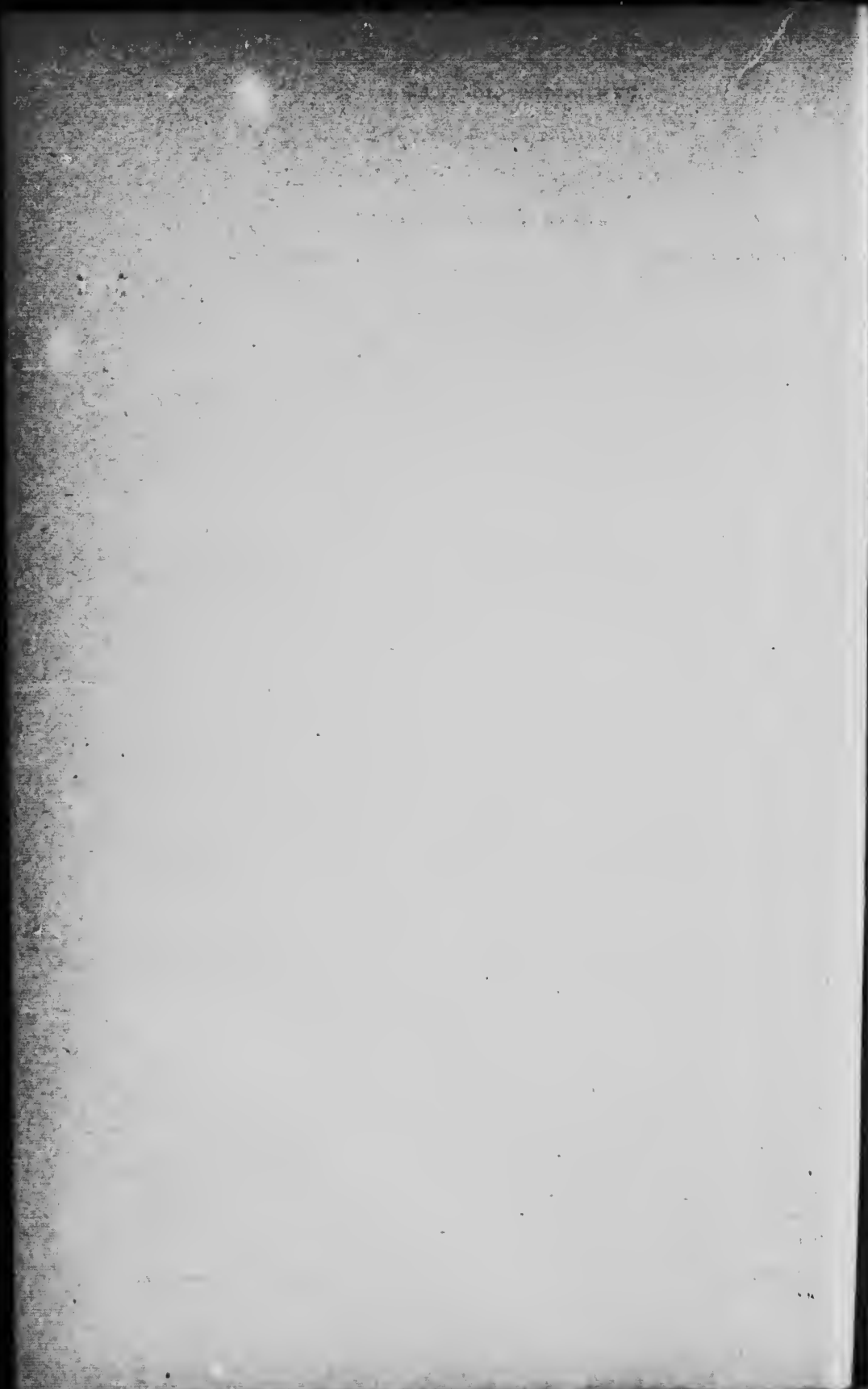
# MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



**APPLIED IMAGE Inc**

1653 East Main Street  
Rochester, New York 14609 USA  
(716) 482 - 0300 - Phone  
(716) 288 - 5989 - Fax



S  
e  
e  
si  
st  
fo  
be  
m

du  
arc

## EXHIBITION CIRCULAR No. 20

DOMINION OF CANADA

DEPARTMENT OF AGRICULTURE

EXPERIMENTAL FARMS

J. H. GRISDALE, B. Agr.,  
Director.

E. S. ARCHIBALD, B.A., B.S.A.  
Dominion Animal Husbandman.

DIVISION OF ANIMAL HUSBANDRY.

---

# CLEAN MILK

BY

E. S. ARCHIBALD.

---

Clean milk is always the cheapest milk although perhaps costing slightly more to produce. Clean milk spoils less quickly, thus saving losses at the factory or with the city milk dealer, giving you a higher butter fat test, and always being in greater demand by manufacturers and consumers. Clean milk is the best of human foods; filthy milk is criminal.

You can produce clean milk at the least possible cost, only by observing the following essentials:

### 1. HEALTHY CATTLE.

Healthy cattle are those which are free, first, from tuberculous, anthrax, or similar contagious troubles. It will pay you, on account of your children, your customers, and your future herd, to discard immediately such animals. Healthy cattle must, secondly, be free from garget, inflammation of the udder, cow pox, and similar udder troubles which contribute pus producing germs to the milk. Isolate such cows until cured. Discard their milk for human consumption and even for feeding live stock unless thoroughly pasteurized. Healthy cattle should also be free from skin diseases and parasites which cause contamination of the atmosphere of barn and consequently affect the milk.

### 2. CLEAN CATTLE AND BARN.

Clean, sweet milk is an impossibility when cattle are covered with mud, dust, and manure, and where the barn is equally filthy. The proper procedures are as follows:

- 1—Stables to be cleaned out twice per day.
- 2—Calf pens and boxes, if in dairy barn, to be cleaned out at least twice per week.
- 3—Cattle to be brushed off once per day.
- 4—Barnyard to be kept clean and free from mud through which cows must wade to get to barn.
- 5—The barn must be kept sweet and free from cobwebs and dust.
- 6—Eliminate contamination by dust from hay by bringing down into barn through dust-proof chutes.
- 7—Clean out the barn and feed all dusty forages, such as hay, after milking. You will thus avoid at least one-quarter of the dirt usually found in milk.

### 3. GOOD BARN.

The good dairy barn where healthy cattle and clean milk can be produced need not be extravagantly built, but must have the following requirements, namely:— Light, ventilation, comfort, efficiency, durability, floors which will not absorb liquid manure, walls and ceilings as smooth as possible to eliminate the gathering of dust and cobwebs. Read Experimental Farm bulletins on "good barns" and "good ventilation".

### 4. CLEAN MILKING.

The cleanest method of milking must include the following items:

- (a) Cows to be bedded down at least 30 minutes before milking.
- (b) Cows to be brushed at least 20 minutes before milking.
- (c) Udders and flanks to be brushed off with clean, damp cloth, just before milking.
- (d) Milker to wear white jacket and apron. These must be kept clean. Change 3 or more times per week if necessary.
- (e) Sleeves to be rolled up clear of wrist while milking, but shirt sleeves not to be exposed.
- (f) Hands and face to be washed before beginning to milk.
- (g) Towels must be kept clean and changed each day.
- (h) Hands to be washed after milking each cow.
- (i) No milk to be used on hands while milking. Vaseline may be used if desired.
- (j) No unnecessary talking while milking.
- (k) No tobacco chewing while milking.
- (l) Cows to be treated kindly.
- (m) Cows to be milked quickly, gently and thoroughly, that is, clean out.

### 5. CLEAN FOODS.

Clean, palatable foods are necessary in order to make the cheapest milk, the most milk, and the best quality of milk. Mouldy, dusty hay, musty grains, and all such containing dust make the cleanest and cheapest milk impossible.

### 6. CLEAN BEDDING.

Clean straw or clean shavings make splendid bedding, whereas dusty straw, dirt from the hay loft, cheap, dusty hay, and the like mean a dusty barn and dirty, poor-keeping milk.

### 7. GOOD MILK PAILS.

The best milkpail is the one with the smallest opening at the top. The poorest milk pail is the large, open-topped pail which will collect the most dust, splatterings, or particles dropping from udder and flanks. The strainer pail is not the best.

The Best Pail.



The Poorest Pail.



Photos by Dr. F. T. Shull.

"Weighing the milk." Note :—Dial face scales.



## 8. CLEAN UTENSILS.

The milk pails, cans, separators, and all other utensils used for milk must be thoroughly washed and scalded twice per day and well aired in a room free from dust and flies. Use a good washing powder in your wash water and scald with pure, scalding water.

## 9. MILK HANDLED QUICKLY.

The handling of milk after milking regulates largely its commercial value. Do not leave milk in the stable or pour milk in the stable after being drawn from cows. Weigh and pour into cans in a clean room adjoining barn. Cool the milk as quickly as possible either by means of a well sterilized, dust-proof, modern milk cooler or in a good ice tank. Ice is indispensable on any dairy farm for the keeping of milk at a low temperature until delivered to factory, milk dealer, or the consumer. The same principle applies also to the handling of cream.

You can build a good ice house and cold storage attachment on your farm at a very low cost, and it will pay for itself in 3 or 4 years.

For further information on the production, care and handling of milk and its by-products and manufactured forms write to the Superintendent of your nearest Experimental Farm or to the Dominion Animal Husbandman, Central Experimental Farm, Ottawa.

