

A 3-HOUR DAY FOR THE HORSE

The horse has a three-hour day according to a Minnesota investigation carried on under the direction of Thomas Cooper, now the director of the North Dakota Experiment Station. It was found that a farm horse averaged about 100 hours labor per year or about three hours per day. It was also found that the cost of maintenance for the horse was \$85 per year. This emphasizes the need of watching closely to see that too many horses are not kept. It also emphasizes the need of keeping brood mares and raising colts, so as to get more returns from the work horses than the three hours of labor per day.

Corn Smut

Corn smut is usually found on the tassel, ears or at the joints. It is not transmitted on the seed as is the case with wheat and oat smut. So treating the seed does no good. The black mass into which the smut transforms the part of the plant attacked is composed of millions of spores, each of which can grow. These spores are hardy, they can withstand extremes of weather conditions and may even pass through animals without losing their vitality. In the spring spores grow and send up a little stalk that produces several spores. When these blow onto the corn plant they take root and start producing smut masses. A field that has been in corn or one on which manure containing corn-stalks has been applied will be infected. If corn is not grown for three years the smut infection will be pretty near gone on that field.

Winter Dairying

Winter dairying has been found to be the most profitable dairying. When the cows freshen in the fall they will give a good milk flow during the winter, and when turned on the summer pastures the milk production will be given a new impetus. The drying up period will come at the time when work is the most pushing, when flies are the worst and when pastures are short.

Another advantage of winter dairying is that milk and butter fat bring the highest price in the winter and labor is the cheapest. On many farms a number of cows could be cared for without any extra labor during the winter.

The silo is a great aid in any kind of dairying, but especially so in winter dairying. Silage is a good deal like pasture, and when supplemented with alfalfa hay and some grain feed a maximum milk flow can be expected.

The cows that freshen in the fall will produce more milk dur-

ing the year than those that freshen in the spring and the largest milk production will come when the prices for milk and butter fat are the highest and labor the cheapest.

Heat and Cold and Germs

Germs cause many diseases, cause decay, cause souring of milk and a great many other changes. The bacteria become inactive when cold, but are not killed. When they warm up again they become active.

For instance, when milk is warm it sours quickly. When it is cold the souring is retarded, and if cooled enough the souring is stopped altogether. Hog cholera germs may be frozen in straw soil or manure and when they thaw out in the spring if taken into a hog give it hog cholera. Heat kills germs. Many bacteria are killed at a temperature of 140 degrees F. when kept at that temperature for 10 minutes, while other bacteria have to be kept at the boiling point two or three

hours to kill them. Disease germs in milk are killed by the so-called pasteurization which consists in heating the milk to 140 degrees for 10 minutes. In canning vegetables it has been found that some must be boiled two to three hours to make them keep.

The keeping of many farm products in condition for market or for use on the farm depends on keeping the bacteria from multiplying and this can be done by either keeping the product cool or heating it to kill the bacteria.

CANADA



NATIONAL SERVICE

PUBLIC NOTICE is hereby given under the authority of the "War Measures Act, 1914," that during the first week in January, 1917, an inventory will be made by the Post Office Authorities, of every male between the ages of sixteen and sixty-five, residing in Canada.

National Service Cards and addressed envelopes for their return to Ottawa have been placed in the hands of all Postmasters for distribution amongst the persons required to fill in such cards. Every male person of the prescribed ages is required to fill in and return a card enclosed in an envelope within ten days of its receipt.

Any person who fails to receive a card and envelope may obtain the same upon application to the nearest Postmaster.

R. B. BENNETT,
Director General.

Ottawa, 15th December, 1916.

THE NATIONAL SERVICE CARD

1. What is your full name?		2. How old are you? years.	
3. Where do you live? Province.....		5. In what country were you born? - - -	
4. Name of city, town, village or Post Office.....		6. In what country was your father born?	
Street.....		7. In what country was your mother born?	
Number.....		8. Were you born a British subject?	
10. How much time have you lost in last 12 months from sickness?		9. If not, are you naturalized?	
11. Have you full use of your arms?		15. Which are you—married, single or a widower? - - -	
12. Of your legs?		16. How many persons besides yourself do you support?	
13. Of your sight?			
14. Of your hearing?			
17. What are you working at for a living?			
18. Whom do you work for?			
19. Have you a trade or profession?			
20. If so, what?			
21. Are you working now?			
22. If not, why?			
23. Would you be willing to change your present work for other necessary work at the same pay during the war?			
24. Are you willing, if your railway fare is paid, to leave where you now live, and go to some other place in Canada to do such work?			

GOD SAVE THE KING