

four times as rapidly as population. According to the annual report of the Exchange, California provided 71 per cent. of the lemons consumed in America last year; the remainder being imported. The output of the growers is tremendous, but for the period covered by the last report the total cost of marketing was only 4 3/4 cents per box. This co-operative association has its own timber limits, saw mills, etc., and furthermore, conducts a supply business for its members which last year amounted to over five million dollars. The whole enterprise is conducted on a business basis by a strong organization with high-salaried officials. This has brought about an extension in markets absolutely necessary to the health of the industry.

All the fruit and berries produced in Canada in 1917 will probably go into consumption without any difficulty and, in most cases, at unprecedented prices to the producer. Nevertheless, if a year of abundant crops should come to pass, or if the industry should be extended growers would find themselves with very poor organization for the distribution of the product and the encouragement of its consumption. Cultivation is carried on, pruning is done, spraying is practiced, and the fruit is harvested and packed all at considerable expense; then we trust to Providence for a market and some returns. A Dominion-wide movement is necessary to stabilize the fruit industry and incorporate some system and co-operation with the marketing methods now in vogue.

POULTRY.

Cleaning, Disinfecting and Whitewashing the Poultry Plant.

In connection with the housing and rearing of poultry, it is important that the houses and yards be clean and sanitary. The poultry keeper can do much in the way of preventing disease by cleaning off the dropping platform regularly, and throwing a liberal supply of lime dust or ashes on it once a week. The straw or litter on the floor should be removed as often as necessary to keep the house clean and the stock in good health. The length of time litter can be kept in a house will depend on the number of hens. Removing it every three months is quite often enough under ordinary conditions. Where each hen has four square feet of floor space, the litter does not become so dirty as in houses where the stock is more crowded. In the summer the litter will remain clean longer than in the winter as the hens are outside more. Chaff or straw makes the best litter for a hen house.

Colony houses containing growing chickens should be cleaned out regularly once a week. After cleaning, dry earth should be thrown in and also some lime dust. This will help to keep it sweet, clean and dry.

The straw in the loft of the gable roof house does not require changing very often. It may be left for eight or ten years, providing it was dry when put in. The dust collecting in it seems to help in keeping down vermin rather than harboring it.

General house-cleaning and whitewashing should be done once a year during the summer. If an earth floor is used, a few inches of the old soiled material should be taken out and clean earth, gravel or sand put in. If a cement floor is used, all the litter should be cleaned out of the house. All loose material should be removed and also the old nesting material. The house should then be thoroughly whitewashed. Get good fresh lime and slake it with water, afterwards adding buttermilk to make it the right thickness, and also adding a pint of salt to every five gallons of whitewash, will make it stick better. A small quantity of carbolic acid, creosote, Zenoleum or Izal added to this whitewash will increase its disinfecting properties. If the whitewash is applied hot, it will be more effective. This method of making and applying whitewash is especially recommended for use in stamping out disease of any kind.

The practice of burning sulphur for disinfecting is not very satisfactory unless the walls and floors are first dampened with water. The sulphur fumes will then unite with the water and form a sulphuric acid which will be more effective. Burning or boiling any of the aforementioned disinfectants will be found very effective in disinfecting a poultry house. All the stock must be removed if the whole house is to be disinfected. For rump this method of fumigating is specially good. Stock affected with this disease can be treated in large numbers by simply letting down the drop curtain at night, and burning the disinfectant in the roosting chamber. This fumigating must be done lightly, or it will kill the hens. Formalin is also a very good disinfectant, but it is important that the house be quite air tight when this is to be used. Information as to the quantity required for any size of house can be obtained from any druggist with full directions for using it.

The soil around the poultry house can be kept quite clean by growing a crop on it or keeping it in sod. Applying lime and cultivating it every few years will do much to prevent disease.

The common practice of using sulphur fumes or lime for red mites on the roosts is of little use. These little insects can be easily controlled by applying a solution of two parts of coal oil to one of carbolic acid. Use a potato bug sprayer for it. Spray the perches well, especially on the lower sides, also the cracks and crevices around the roosting platform. This solution will kill all the mites and act as a disinfectant as well. One application a month during the warm months will be quite sufficient if properly done.

The body lice or common hen lice can be controlled pretty well by providing a good dust bath made of equal parts of fine sand, lime and ashes. Dry road

dust collected during the summer can be used instead of sand. To this mixture a quantity of good louse powder can be used. This can be made at home "by using three parts of gasoline and one part of cresol. Mix these together and add gradually, with stirring, enough plaster of Paris to take up all the mixture. As a general rule, it will take about four quarts of plaster of Paris to one quart of the liquid. The exact amount, however, must be determined by the condition of the powder in each case. The liquid and dry plaster should be thoroughly mixed and stirred so that the liquid will be uniformly distributed through the mass of plaster. When enough plaster has been added, the resulting mixture should be a dry, pinkish powder having a fairly strong carbolic odor and a rather less pronounced gasoline odor."

If the addition of this to the dust bath fails to rid the hens of the lice, it would be well to dust each one separately, working the powder well down to the skin by rubbing the feathers the wrong way.—From Bulletin No. 15, Manitoba Farmers' Library.

Returns From a Small Flock.

According to a pamphlet issued by the Poultry Department of the Agricultural College, Guelph, the average amount of feed consumed by a hen per month in 1913-14-15-16 was seven pounds. If the grain ration was composed of corn and wheat it would cost, at market price the past year, about \$3.35 to feed each bird in the flock one year. However, there are other feeds used in the ration which tend to lower it somewhat, although a hen that lays from ten to fifteen dozen eggs in a year cannot be kept much under \$3.00, with feeds at their present prices. On the farm where the fowl pick a portion of their living, the cost of keeping them is reduced. Until I picked up one of the above-mentioned pamphlets giving the quantity of feed required per bird per month, I thought that my feed bill for a flock of six birds was excessive. In fact, it was 19 pounds of grain per bird more for the year, but I do not think I fed to excess.



Hon. T. A. Crerar.
Minister of Agriculture in the new Union Government.

For the past year my flock has averaged six hens, and for nine months of the year a male bird was in the flock. They were housed in a small pen that had a cotton front but no glass. In spite of the excessive cold of last winter the birds did not appear to suffer. Besides the table scraps, the birds were fed 200 pounds of wheat, 175 pounds of corn, 160 pounds shorts and bran, 85 pounds of oats, 15 pounds of meat feed, 30 pounds of oyster shell, 10 pounds of commercial grit, and one bushel of mangels, besides green stuff from the garden. One-half bale of straw costing 40 cents was used as litter in the pen. This feed was purchased in small quantities at a total cost of \$19.18. It seemed like a lot of money to pay out for feed for six hens and a male bird, but when their egg yield is figured up at market prices for the year, there is a substantial profit per hen, thus showing that the cost of feeding is not so important if the egg production per hen is high. Both feed and eggs have been above normal in price, so that no one had much room to kick on feed prices if he got eggs.

My small flock laid 36 eggs in October, 42 in November, 63 in December, 96 in January, 120 in February, 135 in March, 102 in April, 95 in May, 96 in June, 84 in July, 75 in August, and 61 in September, or a total of 1,005 eggs for the twelve months, which is an average of 167 1/2 eggs per bird. The price of eggs on the market varied from 35 cents a dozen in April and June to 55 cents during the winter months. With the price for the year averaging 44 cents, the revenue from the six hens was \$36.85. This is \$17.67 over the cost of feed, or a profit of \$2.94 1/2 per bird.

While my egg yield was considerably above the

average, it fell far short of what some poultrymen claim for their flocks. However, with this production it paid me to keep a few hens. If the flock was increased to fifty or one hundred birds, I don't expect I would get over two-thirds the average egg yield, but even then it would pay. As it was, a dozen eggs cost me 22.9 cents; at two-thirds the yield, a dozen eggs would cost 34.55 cents, which would still be profitable at the average price for the year, but if the egg yield had fallen to eight dozen per bird, each dozen would have cost 39.95 cents. Thus, the hen that lays eight dozen eggs more than pays her way when grain is high priced. It would not cost as much to feed the farm flock as most of the grain would be grown and fowl pick up a lot of feed that would otherwise be wasted. If you can get the production there is money in hens. A laying strain is the first requisite, then the birds must be properly housed and fed. I was talking to a man the other day who usually keeps a flock of a hundred or more birds. He has a laying strain of a utility breed, but he claimed that \$4.00-per-cwt. grain was too expensive to use to satisfy the birds' appetites. He fed light and as a consequence did not gather many eggs when they were at their highest price, although the yield for the summer months was fairly good. It is rather difficult for a hen to make up during the summer for time lost in the winter. Fowl are very much like other classes of stock, you have to feed before you get returns.

URBANITE.

FARM BULLETIN.

The Union Government.

All Canada, outside of those few who put party first in all things, rejoiced last week when it was announced that Sir Robert Borden, working in conjunction with the Liberal leaders from the various Provinces, had been successful in forming a real Union Government. What Canada has wanted for some time has been a united effort on the part of the Government, but for some reason certain politicians blocked union and delayed the move which has just taken place. As constituted at the time of writing, the new Cabinet presents the following exceedingly strong line-up:

Sir Robert Borden, Prime Minister and Secretary of State for External Affairs; Hon. N. W. Rowell, President of the Council; Major-General S. C. Mewburn, Minister of Militia and Defence; Sir Thomas White, Minister of Finance; Sir Edward Kemp, Minister of the Overseas Military Forces; Hon. H. D. Reid, Minister of Railways and Canals; Hon. C. J. Doherty, Minister of Justice; Hon. C. C. Ballantyne, Marine and Fisheries; Hon. Arthur Meighen, Minister of the Interior; Hon. A. L. Sifton, Minister of Customs; Sir George Foster, Minister of Trade and Commerce; Hon. T. A. Crerar, Agriculture; Hon. J. A. Calder, Immigration and Colonization; Hon. T. W. Crothers, Labor; Hon. Martin Burrell, Secretary of State and Minister of Munitions; Hon. Pierre E. Blondin, Postmaster-General; Hon. Albert Sevingy, Inland Revenue; Hon. Frank Cochrane and Sir James Lougheed, without portfolio; Hon. Hugh Guthrie, Solicitor-General; Hon. F. B. Carvell, Minister of Public Works.

Premier Murray, N. S., is likely to join the Cabinet, and a labor representative is also being considered at time of writing.

Readers will be particularly interested in the appointment of Hon. T. A. Crerar as Minister of Agriculture. Mr. Crerar was born in Ontario but left this Province at the age of five years to settle in the West. The New Minister of Agriculture is best known from his great work as head of the Grain Growers' Grain Company, of Winnipeg, which position he took in 1907 and has held ever since. Of late years he has been particularly concerned in the amalgamation of all the interests of the organized grain growers of the Prairies, and this was successfully brought about on September 1 this year under the name of the United Grain Growers' Limited.

Mr. Crerar got his early training on the farm, near Russell, Manitoba. He was educated at the public school there and at Portage la Prairie Collegiate, afterwards attending Manitoba College. After leaving College he engaged in farming and the elevator business, where he got the experience from which he has developed into one of the keenest and ablest business men in Western Canada. Mr. Crerar knows the agricultural problem well, is in sympathy with everything which tends toward agricultural development, and has the ability to fill an important place in the Union Cabinet and to make the Agricultural Department, one of the most important Departments in peace or in war, one of the strongest of all the branches of the Government. Agricultural Canada expects big things from Hon. T. A. Crerar.

An Important "Sheep" Order.

As we go to press the following notice is received from Dr. F. Torrance, Veterinary Director-General:

"All sheep imported into the United States from Canada for breeding, grazing or feeding must be inspected at the port of entry by an inspector of the Bureau of Animal Industry. They must also have been inspected by a veterinarian in the employ of and receiving a salary from the Canadian Government, and be accompanied by a certificate signed by him stating that he has inspected the sheep and found them free from disease, and that no contagious disease affecting sheep has existed in the district in which the animals have been kept for 60 days preceding the date of importation. The owner or importer shall present an affidavit that said certificate refers to the sheep in question. Any such sheep which are unaccompanied by the aforesaid certificate shall be subjected to a quarantine of 15 days."