tically cry "thumbs down." Young animals, except in cases of straight heredity, never have tuberculosis, and it is well known that a properly nourished man may carry the germs of consumption through life and never develop them. Phosphated foods may not cure any case, but surely it is proved that they will tend to a general strengthening of the stock of animals and human beings nourished by them.

Co-operative Poultry Farming

This plan is followed to some extent in Ireland, France, and Denmark, and works out very successfully. There are two ways of carrying on the business. One plan is for several farmers in a locality who keep poultry to co-operate in the marketing of the eggs. Some one of the number is appointed to receive the eggs and forward them to market and to receive the money for them and divide it amongst those who have sent in goods. Arrangements can be made where necessary to purchase feed at wholesale prices and effect a great saving in the cost. One good feature of this plan is that the eggs can be sent forward in a fresh condition and in large enough quantities to secure reduced freight rates. This plan, however, is not real co-operative farming. The latter is a rather more complicated matter. In real co-operative poultry farming, as carried on in Ireland, a society is formed to which a membership fee is charged. A central depot is secured, at which one of the officers of the society keeps boxes for packing the eggs and fowl. The goods are sent forward in the same way as in the other plan, except that the officer in charge first pays all expenses, then pays an agreed-on price to each member, and then gives one-half the balance in proportionate shares to those who supplied the produce, and the other half he puts to the credit of the society, and at the end of the year a dividend is declared and paid to each member in proportion to his supply of goods. This officer also sells to the members food and appliances at reduced rates.

CORRESPONDENCE

Preserving Eggs

The Results of Some Experiments Conducted at the Central Experimental Farm

To the Editor of FARMING:

Having received numerous enquiries from farmers during the past two months respecting the merits of "water glass" as a medium in which to keep eggs, we are led to think that certain conclusions drawn from an experiment, lately brought to a close, with this and other preservatives will be of interest to your readers.

The investigation was commenced last September, perfectly fresh eggs from the Farm poultry house being used for the test, which consisted in immersing the eggs for varying lengths of time, from a few hours to six months, in (*a*) lime-water, and (*b*) 10 per cent. solution of "water glass." Those eggs which were treated for a few hours, days, or weeks, as the case might be, were subsequently placed, together with the untreated eggs to be used as a check, in a rack within a drawer in the laboratory till the close of the experiment, March 30th, 1899. All the eggs were at a temperature from 65° to 72° F. throughout the trial.

The testing consisted in breaking the eggs into a glass and noting the appearance of the "white" and yolk, whether the yolk was stuck to the shell, size of air-space, odor, etc. The eggs were then poached and again the odor, appearance, etc., noted. Without giving in detail the results of the various trials, it may suffice for present purposes to summarize the conclusions reached, as follows:

CONCLUSIONS.

1. In no instance, either of treated or untreated eggs, were any "bad" eggs found.

2. In all cases where the eggs were not kept covered throughout the period of the test with the preservative solution, shrinkage of the contents had taken place, as shown by the larger air-space, the less globular form of the yolk, and in many instances by the adherence of the yolk to the shell. The eggs treated for seven days and less with lime-water showed somewhat less shrinkage than those treated a similar length of time with silicate of soda.

3. It would appear that lime-water and "water-glass" used continuously are equally efficacious in preventing shrinkage. They may also be said to give practically the same results as regards both external and internal appearances, flavor, etc., of the eggs preserved. Since "water glass" (silicate of soda) is more costly and more disagreeable to use than lime-water, we could not from the present results recommend the former as the better preservative.

4. The albumen or "white" in all the preserved eggs was very faintly yellow (though not to the same degree in all the eggs), the tint becoming deeper on boiling.

5. No offensive odor was to be perceived from any of the eggs when broken, but in all instances a faint but peculiar musty or stale odor and flavor developed on poaching.

6. It is probable that no preservative will prevent the loss of flavor possessed by the fresh egg, but those which wholly exclude the air (and thus at the same time prevent shrinkage from evaporation) will be the most successful. Continuous submergence is evidently better than treatment for a few days.

"Water glass," known chemically as silicate of soda, is a fluid quoted at 60c. per gallon. It is highly caustic, due to excess of soda, and consequently is more disagreeable to use than lime-water.

The lime-water may be made by putting 2 or 3 pounds of good fresh lime in 5 gallons of water, stirring well at intervals for a few hours, and then allowed to settle. The clear supernatant fluid can then be poured over the eggs, which have been previously placed in a crock or water-tight barrel. Some authorities recommend the addition of a pound or so of salt to the lime-water, but the writers are of the opinion that this is unnecessary, and probably leads to the imparting of a limey flavor to the eggs by inducing an interchange of the fluids within and without the egg.

The all essential points to be remembered are: (1) that the eggs to be preserved shall be perfectly fresh, and (2 that they shall be covered with the preservative fluid.

FRANK T. SHUTT,
Chemist Dominion Experimental Farm.

A. G. GILBERT,
Poultry Manager Experimental Farm.

Central Experimental Farm, Ottawa, May 22nd, 1899.

A Much-Needed Measure

Mr. John McMillan, M P., has introduced a bill into the House of Commons to amend the *Weights and Measures* Act so that all eggs sold in this country shall weigh at least a pound and a half to the dozen. Such a piece of legislation has our hearty approval. There are eggs and eggs, and it is simply absurd to contend that a dozen small eggs weighing no more than a pound are worth as much money as a dozen eggs weighing one and one-half pounds. But still this is what the present law upholds, and it is time something were done to remedy matters. Under existing conditions in this country there is no incentive to the poultry-keeper to produce large eggs. In fact, everything considered, it will pay him better to produce small eggs, as he can get as much per dozen for them as for large ones, and does not have as large weight to handle.