

in its little stomach. . . . The imitate the calf by using a small mouth which prevents the barn from dropping into the time. A small-mouthed pall plenty of boiling water to keep rile; a tank of ice water to these three things alone will y clean milk on any dairy

clean milk concludes: "The should receive more money for the dirty dairy farmer. Milk ities have already established in the country where payment based on the cleanliness of the milk is winning its fight and ng ground every day. Clean lk."

ends "clarification" of milk the safety of raw milk by us, waste tissue and large a. However, he recommends such a temperature and for me as will destroy the worst least damage to the milk it 45 degrees F. for 30 minutes ctice. Five reasons are given k which may be briefly sum- it prevents infant deaths and e germs. This statement is nic of disease has ever been d milk. The objections raised hat it is a substitute for ts adversely the digestibility milk, are met by saying, the prevent the first; and experi- in New York at 55 municipal 18,000 are fed daily in 00 in winter, disprove this out pasteurization of milk ts. "For three years all of n pasteurized. Records have es have gained weight, have wn no signs of rickets or way give evidence that pas- ot inferior in food value or milk. The death rate among period has been reduced from 94 per 1,000 births which ity in the lead of any large in the reduction of infant

n the milk bottle is recom- method. Where the dealer it should be done at home r." The pasteurization of a guarantee to any house- ead can enter the family apply.

referred to as ideal milk in liness but cannot furnish a disease germs. After pointing diseases may be transmitted v milk, he states: "The results dence in any raw milk, no has been shaken and the ities now believe that even is unsafe and should be pas- oints out that "Certified ve. . . . Every quart carries m 5 to 10 cents above the

for buying milk is.—"Three importance to be considered. decency and price. Safety more important than decency

concludes, advising Municipal establishing a Milk Laboratory pasteurizing and compulsory der sanitary conditions, and milk before pasteurization into and C, with bacterial stan- de. A valuable summary of s covered is given on the last

"MILK"

ve cover on the pamphlet Insurance Company shows a eld and over her is erected a ch pasteurization is the key- tones making up the arch are Clean Barns," Clean Pails," "Protection Against Flies," st Dust," "Clean Hands," "Sterile Cans," "Sterile Shipment," "Care in Home," official inspection." The four- "Care," "Clean," "Cold," t may be called the four C's ction.

eat with in the form of a On the first page is an d's tombstone on which the d but underneath are the the Disgrace of Impure Milk." question, "Did Nature Intend

Us to Use Cow's Milk?" The writer says, "No."

"What is the advantage of nature's plan?" "In nature's plan the milk is taken directly at its source while pure, fresh, sweet, clean and wholesome. Milk was never intended to see the light of day. Nature's plan keeps out dirt, germs, flies and fevers."

After pointing out the high food value of clean milk and that it is one of the cheapest foods on the market, the danger of tainting milk by absorbing flavors and odors is pointed out, also the danger of milk decomposing quickly unless pasteurized and kept cold.

"How should milk be cared for in the home?" "Milk should not be allowed to stand out of doors but should be taken in as soon as it is delivered. In the home, milk should be kept cold, clean and covered. If part of the milk in a bottle is used, do not replace the paper stopper, but invert a clean tumbler over the neck of the bottle and at once replace in the ice-chest. Have a special place in the coldest part of the ice-chest for the milk bottles. The best way is to have the milk bottle touching the ice."

The dangers of "dip" milk and of milk put in a bottle which has not been properly sterilized, are referred to; also, the advantages of bottle milk, which are, "cleanliness and protection from dirt, flies, fingers and germs." Licensing all milk dealers is strongly recommended, as the author considers this more important than licensing "plumbers, undertakers or trained nurses."

Nursing children by human mothers wherever possible is strongly endorsed, as the human milk contains anti-toxins which guard the child against infectious diseases. These anti-toxins are not found in cow's milk used for the human. While he agrees that it would be very difficult to get along without cow's or goat's milk, he points out that the milk from these two animals differs radically in composition from that of human milk and suggests modification for children.

In answer to the question, "Is a very rich milk good for the baby?" He says, "No, it is harmful. Too much fat causes indigestion and a sort of self-poisoning, leading to diarrhoea and summer complaint."

"Is it possible to modify cow's milk so as to resemble mother's milk?" "Yes, to resemble it, but never to be just as good." It is impossible to change cow's milk into mother's milk. By diluting cow's milk and adding sugar we can make a mixture that is something like mother's milk, but always lacking important substances. "Can this deficiency be made up?" "In part, by giving barley-water and orange juice."

We are told that "bitter" milk is apt to be dangerous, because it may contain ptomaines or bacteria which produce these poisons. "The opacity of milk covers a multitude of sins," hence he advises the use of a "Dirt Test" or what is sometimes called a "Sediment Test" by which a pint or quart of milk is filtered through a cotton disk and the dirt collected where it can be seen.

While milk contains millions of bacteria in every spoonful, "they are not necessarily harmful. Mere numbers need not frighten us. It is the kind of bacteria rather than the number that concerns us. Many of the bacteria in milk are our friends, not our enemies."

"Clean milk, kept cold and properly protected, shows very little change in three or even five or ten days,"—this in answer to the question, "How long will clean milk keep?" With care, cleanliness and the use of ice, a satisfactory grade of milk may be sent to market by any farmer."

In answer to the question, "How is milk classified?" We read, "There are only two classes of milk—good milk and bad milk. There is a tendency to classify all milk as raw milk or pasteurized."

"Does pasteurization improve milk?" "Pasteurization neither improves nor harms the milk itself."

"Is pure milk better than purified milk?" "It is; but it is so difficult to get pure milk that our only real safety lies in pasteurization."

"What is the solution of the milk problem?" "Inspection and pasteurization. We need inspection to keep milk clean; we need pasteurization to render milk safe."

These booklets on the milk problem are worth the careful study of all those interested in the question of pure milk. They are written by well-known and recognized dairy authorities and are published, we believe for philanthropic purposes, not to make money.

O. A. C.

H. H. DEAN.

Provide plenty of clean, fresh water for the calves during hot weather. The calves getting milk require water in addition to their other drink, and it is surprising what a quantity they will utilize.

POULTRY.

Preparation Essential for Good Winter Results With Poultry.

Editor "The Farmer's Advocate":

Along in December and January people having poultry begin to complain of not being able to get eggs while the prices are so high. There may be a good many causes for this. Low vitality, owing to poor parent stock, may have an immense bearing on the possibilities and the fixed traits from the past few generations must doubtless have their effect. The hatching and growing of the birds will have a marked influence and unless these conditions have been fairly good it is unreasonable to expect good results. Even having conditions favorable many lose considerable because when the change of season comes they have not prepared the pullets and hens by getting them into winter quarters and seeing that they are absolutely comfortable and ready to make a business of supplying the best of fresh eggs when the price is high.

It is absolutely necessary that all the flock be sturdy and vigorous. Every non-producer makes it that much harder for the good layers to show a profit and they should be removed wherever detected if the best results are to be had. In many flocks will be found a few very good producers, some fair ones and a lot very low in their showing. These eat up all the profit from the others and consequently should be disposed of as soon as possible.

The earlier the pullets can be placed in their winter quarters after September 1 the better. This gives them plenty of time to get used to their surroundings and they finish off in the environment under which they are to produce the eggs. By this we do not mean that they should be closed up in stuffy houses and treated as though they did not have their own winter coats with which to withstand the cold. On the contrary the cool house is much better for them and with lots of fresh air in them they keep dry much easier which is very much more necessary for good results. If we have handled them right they have been brought up first in brood coops with free top ventilation and afterwards colony coops much on the same plan and open on the South side. The transition to the open front laying house will be quite natural and cause practically no disturbance to their progress provided no other new changes occur.

At this time it is wise to see that no repairs are left unattended, such as broken windows etc. for the birds with the cold fall nights will be very susceptible to colds from drafts and if they get at all off color at that time little chance is there of securing many eggs before the winter is well over. Every precaution should therefore be taken to see that all necessary house repairs should be done early and no risks run in the securing of eggs owing to a little delay along this line.

Nice clean litter must be provided and lots of it so that the birds will keep clean and have to work hard for all the grain they get. Everything in the way of nests, dropping boards, dust boxes, grit boxes, water tins etc. should be arranged as they are to be all winter. This prevents any irritableness caused by disturbing the birds by in any way changing conditions. Provided that they get lots of sunshine on the floor, that there are no drafts in the house, with good feed and water, they should be happy and when a hen is happy and well it will if it has the right hereditary qualities produce plenty of eggs.

Something that may be done at this time rarely thought of is to consider the improvement of the soil in the runs. As late as the ground can be dug up it may be sprinkled with air-slacked lime, turned over and wheat, rye or anything of this kind that will stand the winter be sown providing excellent early green feed for the birds as soon as conditions will enable the seed to germinate and grow. If suitable green feed has not been grown on the place it should be secured now as farmers usually have supplies of such product useless as market truck that would simply be thrown away that may be secured for practically nothing. Later when the need for it arises nothing is available but the good products for which the price is high. There is such a variety of products that may be used for this purpose that there is no excuse for not supplying the birds with good green feed all the year. This may not always be supplied green but boiled vegetables furnish the elements desired and on cold winter days when mixed with other feeds we think it is equally well relished especially if they may be alternated with fresh green products. Cabbage, mangels, sugar beets, and like products supply the fresh green not to mention the valuable addition of sprouted oats. All sorts of vegetables may be boiled and have an added relish during the winter season. Where these are

not available cut clover and alfalfa steamed give first class results and can be relied on almost entirely if necessary for green feed.

In the same way it is generally possible to get in a better variety and class of grain feeds at lower cost if arrangement is made soon after the harvest. Everyone is getting their barns and store-houses pretty well filled up and often just at that time a little extra supply can be secured to advantage. When we have the best possible grain of considerable variety, plenty of clean juicy vegetables and a nice clean house, plenty of fresh air and sunshine with well grown vigorous stock forced to work to the limit scratching for their food there is not the slightest doubt that early and all-winter eggs will be secured. Nothing responds to right treatment like a hen. She just seems to have her string of eggs latent within her waiting for the man who will supply the proper food and environment to cause the egg-producing organs to become active and when brought to that condition in a steady natural way will produce a long succession of clean well shaped and high quality eggs producing her share when the price is high and the other birds less fortunate are waiting for the warm days of spring.

Welland Co., Ont.

A. P. MARSHALL.

Laying Contest on the Pacific Coast.

In the Fourth International Egg Laying Contest held under the supervision of the Provincial Department of Agriculture, at the Exhibition Grounds, Victoria, B. C., D. Gibbard of British Columbia is leading with a pen of Barred Rocks, with a total of 1,018 eggs from October 10, 1914, to July 9, 1915. The nearest pen approaching this in the weight varieties are White Wyandottes owned by G. D. Adams of B. C. They have a record of 936 eggs during the same period. Rhode Island Reds come next with a record of 906. In each pen there are 6 birds. In the non-weight varieties a pen of White Leghorns have a record of 993 which places them second in the entire contest. These are owned by L. M. Ross, also of B. C. The majority of the non-weights are White Leghorns. There is one pen of Anconas and one of Silver Campines.

The remaining months of the contest may be termed the period of uncertainty. From now on the pens that escape the molt and can manage to lay a goodly number of eggs stand a good chance of considerably improving their position. A single comb Rhode Island Red has the reputation of laying the largest egg of any in the contest. The egg is single-yolked and of good shape and shell texture. It weighs nearly three ounces.

Crude Carbolic for Poultry Vermin.

Editor "The Farmer's Advocate":

The article in your issue of July 15, on cleaning up poultry houses at this season is timely and to the point as vermin not only cause the death of many young chicks and impair the vitality of older birds. They also find their way into other stabling and become a nuisance on cattle and other stock. I have found a very effective treatment to spray the interior of such compartments thoroughly with a solution of crude carbolic acid in water in the proportion of one of the former to from 21 to 25 pints of water. My plan has been to put the acid in a vessel first and then pour in say a gallon of hot water to facilitate the dilution adding the cold water necessary next. Sometimes a dash of kerosene oil is added. If this treatment is followed in a day or so by a coat of lime whitewash the job will be complete. I have sometimes mixed a little crude carbolic acid in the whitewash also. Being poisonous, mixture containing the acid should not be left standing about in open vessels.

LEG HORN.

HORTICULTURE.

Prepare for the Fruit Harvest.

The season is approaching when the rush of harvesting and marketing the apple crop will cause no small amount of haste and worry. In some districts the crop will be light while in others the trees are heavily laden. In any case preparation should be made. There are barrels and boxes to procure, baskets and ladders to be obtained and adequate arrangement made for handling and housing the product.

Secretaries of associations can do much at this time by getting in touch with prospective buyers. Purchasers of last year's crop should first be canvassed for if an organization of fruit-growers is to be a success they must hold their customers through prompt shipments, honest packs, service and value for the money. If this