water, then rinsed well with cold water. This will freshen the churn and fill the pores of the wood with water so that the cream and butter will not stick. Let me say right here that we think the churn has a great deal to do with the appearance of the butter. We use an ordinary barrel churn, because it churns easily and quickly, and there is no dasher inside to beat and break the grain and make the butter look like lard with butter coloring in it.

All cream should be carefully strained into the churn. This removes the possibility of white specks in the butter. These usually consist of curd or dried particles of cream. Butter should be churned until the granules are about the size of wheat grains. When larger than this it is more difficult to remove the buttermilk and distribute the salt.

As soon as the butter granules are the proper size, draw off the buttermilk and put in as much water, (the same temperature as the buttermilk or a degree or two warmer) as you have buttermilk. Turn three or four times, draw off, have a bucket of clear cold water, the same temperature as before, and pour on butter until the water runs off clear.

It is needless to say that nothing but the best grade of salt should be used in salting butter. I would prefer the flake salt, as it dissolves more readily and is not so liable to make mottles. The amount of salt to use in butter, is a matter of taste and opinion. Salt adds flavor to butter, and materially increases its keeping qualities. Very high salting, however, has a tendency to detract from the fine delicate aroma of butter, while at the same time it tends to cover up slight defects in flavor. As a rule butter-makers will find it to their advantage to salt rather highly. Salt very readily absorbs odors and must therefore be kept in clean, dry place where the air is pure and should be the same temperature as the butter when used.

The chief object in working butter is to evenly incorporate the salt. Our method is as follows: After wash water is drained off, salt is carefully distributed over the butter, worked in the churn just enough to get the salt into the butter, covered up and let stand for twenty minutes or half an hour to allow the salt to dissolve. Then remove to the butter worker, and finish by working enough to get the salt evenly distributed. The rule to follow is to work the butter just enough to prevent the appearance of mottles. Just how much working this requires every butter-maker must determine himself, for the reason that there are a number of conditions that influence the length of time that butter needs to be worked. After working then mold. We use the one-pound brick molds Wrap each cake separate in a parchment paper, and the butter is ready for market.

Johnson Co., Ill. W. H. UNDERWOOD.

Pasturization Temperatures.

Temperatures recommended by the Ontario Dairy Instruction Staff for pasteurizing milk, whey, skim milk and cream, are thus charted by Chief Instructor Herns:

For milk for city supply, 140 degrees Fah. (for twenty minutes); for whey, 155 degrees Fah.; for skim milk, 155 degrees to 180 degrees Fah.; for cream, 160 degrees to 180 degrees.

Cooling Capacity of Ice.

For cooling purposes 10 pounds of ice equal 100 pounds of cold well water. Ten pounds of ice plus 100 pounds of cold well water equal 200 pounds of water.—Frank Herns.

POULTRY

To Ensure Good Produce.

Editor "The Farmer's Advocate."

Having read the article in your most valuable paper, issue of March 13th. "Sell the eggs to the consumer," I may say that I for one would gladly sell to some good reliable consumer if such can be found. I do not doubt but that plenty such can be located, but it has too often been the case, as stated in the article in question, that finally producers lost eggs, crate and all. If producers and consumers could be better protected through some legislation or any other honest means, they could cut out the middleman's profits and run the business on a 'C. O. D. basis, and the consumer would be more likely to get fresh butter and eggs for his table. And I would also recommend protecting consumers by stamping every egg with the producer's name and post office address. There would not be so much complaint about stale or bad eggs, as we are all aware that some farmers are in the habit of storing up eggs when they are cheap, and rushing them onto the market when the price soars. The consumer who probably has a hard time to make both ends meet goes home from the grocer with probably half a dozen eggs for which he pays the tempting price the producer has waited perhaps two or three months to obtain, added thereto the middleman's profits, and when his good wife perchance breaks the first shell that fresh egg, laid two or three months ago, proves to be stale. Now why should farmers or producers attempt to market any products which they would not eat themselves? The same might also be said of butter, but in that case the flavor can be detected more readily than in eggs. Why should not producers unite and say let us stamp our eggs and have our butter wrappers with our names and post office address printed plainly on same, then all goods could be sold on their merits?

In your issue of March 6th we readers were presented with a gestation table worth a year's subscription alone to farmers.

Perth Co., Ont. M. WAGLER.

Improve the Flock.

Editor "The Farmer's Advocate":

How to improve the farm flock is a problem making itself felt all over Canada at the present date. Up to a few years ago poultry raising, by farmers in general, was not practiced to any extent, as very few farmers thought, or tried to make, their poultry profitable. Eggs and a roasted fowl once in a while were desirable, and fowl of a nondescript variety were allowed to exist around the barns in order that these "desirables" might be obtained when wanted. Eventually people began to see the great possibilities latent in the poultry industry and began to give their fowl more attention than formerly, with the result that at the present time the poultry industry is making remarkable progress, and farmers are beginning to see that, given the same care and attention as other stock, fowl are the most important side line on the farm.

Of course there are a large number still in the "doubting Thomas" class, but the more intelligent are finding the silver lining of poultry keeping in the shape of profitable returns for both eggs and poultry. It is not necessary farmers specialize either for eggs or meat in order to make poultry pay. In my estimation it is better for them to give both some attention, but in any event let them do away with the "scrubs" in the poultry yard, for they are neither profitable nor beautiful.

The spring is a good time to prepare for the change if you have not already taken steps toward the desired end. Some people prefer purchasing a breeding pen of say six, eight or ten hens and a male, but the spring is a poor time to think about doing this, as purchasers are usually much more numerous than really good pens of birds, and those who have stock to sell are not very likely to have wintered any more than they need themselves, or if they have it would be a fancy price that would induce them to part with their best ones or almost any but their poorest stock. The best plan then is to buy eggs for hatching, and if possible to see and know the stock from which you are getting them. If this is not possible, then get some reliable information about the stock you are intending to get eggs from, or you are liable to be disappointed. If you are getting any quantity I would advise setting a few of them, say, two or three settings, early, so as to have enough early pullets to form a good strong breeding pen for next year. It is not wise to have them all early, as you would not be likely to have as good hatch from early-set eggs, and unless the spring is favorable the May hatch has the best chance to come to maturity, but May-hatched pullets would scarcely be in fit condition for the breeding pen next year, so if you think of doing away entirely with your scrubs, follow this plan and get a few settings of good eggs early and more later on. Then give them all the best possible chance to mature without any set-backs, and if you have got a good healthy laying strain of whatever breed you have chosen, then your chances for substantial profits are good. Those who have turned from the nondescript class of dairy cattle, so common a few years ago, to an improved grade or pure-bred dairy stock, would not think of putting the two in the same class. The former lack appearance, size and milking qualities as compared with the latter, but their digestive capacity is quite as good, if not better in many cases, than that of their better-bred sisters. It has been proved in the dairy world without doubt that a pure-bred or good grade cow will produce more and better milk on the same or less feed than the common cow, it is the same in the poultry world. A pure-bred or even a grade chicken at the same age and on the same feed will weigh far more at maturity or when taken from the fattening crate than any scrub stock of the same variety that you like to choose, and if they have been from "bred-to-lay" stock they will lay earlier, will lay more eggs in the year, and the eggs will be of a better size, just as the pure-bred cow of good milking strain will give more and better milk than the common cow.

Another but slower method by which you may improve your stock is by getting pure-bred males of the best obtainable laying strain and mating them to a few of your best-looking and best-laying hens, but here again it is rather late to get good males, as the best ones of every flock will long ago have been bought up unless you can get them from some one who is "selling out" where everything is being let go. In that event again you would need to know your stock and use judgment in purchasing. Very often people improve by buying a setting of eggs and mating the cockerels raised from it to some of their own flock, but this is both slow and uncertain as it takes years of careful selection, out of an ordinary flock, to produce a strain of really profitable layers, whereas, by the purchasing of a large enough number of eggs in one season to raise enough pullets to keep over, you can "get into" a good laying strain that will much more than pay for themselves in one season. Pure-bred cockerels, of a good strain, find ready sale as breeders in the fall at a good price, and the sale of your surplus of them alone will go far toward paying for your eggs, and in many cases will more than do so.

Carleton Co., Ont. H. C. S.

GARDEN & ORCHARD.

Prune the Orchard.

Editor "The Farmer's Advocate":

I think there is no branch of farming so little understood, neglected and little written about, as trimming an apple orchard. As we drive along the road and look at the orchards, one may suppose that the press has been silent in regard to trimming an orchard, but where trimming has been practised it seems as though the only object has been to make a well-balanced tree, and possibly also to make it so thin that a goose could fly through it. I will admit that in the centre of the tree a goose could find its way through its bare branches. But follow the limb out farther where "the man with the saw" dare not go, a robin would have to dodge considerably or the morning papers would have a head-on collision to report.

I have been more or less connected with apple-packing all my life, and before people started spraying it seemed to me that there were about as many apples spoiled by improper trimming as not sprayed. Now let us have an improvement in trimming equal to that of spraying, and we are ready to grow apples right. First thing, let us drop the word trimming and substitute pruning; get a good ladder, a pair of hand pruning shears, and an improved pruning hook, with a handle four or six feet long, and still use the saw a little for cross limbs and where two limbs are close together.

In a year, in which apples are a full crop, a limb will produce more apples than it can bear up without breaking, so do not cut many of them off but thin them out, then, after cutting off the few limbs take hand clippers and climb ladder and thin out the twigs according to your judgment, thin enough so that leaves, twigs or apples will not touch any other apples to cause them to be misshapen. In a Spy I have taken out one-half of the brush, and usually clip it just beyond the fourth fruit-spur as that will be about all the twig will grow to perfection, but do not cut twigs close to the trunk limb unless they are very thick. If trimmed in this way very few, if any, fruit-spurs will need clipping unless it be a Baldwin or perhaps a Greening.

Care should be exercised to leave twigs all through the trees so you can grow as many perfect apples as possible. The suckers should be clipped about a foot long and left two or three years (according to the growth made), and spread out so they will fill the whole centre of the tree.

All twigs should be cut immediately above a shoot, and limbs cut close to the trunk limb as to insure quick healing of the wound. Large cuts should be painted, so they will heal over before the wood decays and the wet gets in and spoils the tree.

In forming the shape of a tree crotches should be avoided, but if allowed to stay they should have a long bolt put through each, over to another limb.

Norfolk Co., Ont. CHARLES W. CURTIS.