

able temperature, will rapidly develop and bring about the souring or ripening required to permit of the cream churning readily and a good quality of butter being produced.

A good starter should be added to the cream about ten hours before churning. A good starter may be made from skim milk. That from a fresh cow gives the best flavor. Place the skim milk in a tin or earthenware vessel and hold at a temperature of from eighty to ninety degrees until it has lopped. If the quantity thus prepared is not enough, get some clean skim milk and pasteurize it, that is heat it up to 170 degrees and hold it there for twenty minutes, cool it down to seventy-five or eighty and add it to the starter already made, and let it stand at that temperature for several hours; then cool down as low as possible. It is now ready to add to the cream. Use one quart of starter to every ten quarts of cream, let it stand twelve hours and then churn at a temperature of about sixty-five. Butter-making at this season would be much more satisfactory, and the product superior in quality if buttermakers would give more attention to the ripening of their cream. It is the ripening more than anything else that determines the quality of the butter, bring about the right kind of fermentation in the cream before it goes into the churn and the quality of the butter will be improved, its quantity increased and the time required for churning shortened.

#### Treatment for Bloody and Discolored Milk

When blood as blood is drawn from the udder it generally makes its appearance toward the end of the milking, that is, it comes with the strippings.

The cause is weakness of the capillary vessels, which ramify through the udder. Normally these vessels have very thin walls, and readily exude their contents—indeed, it is part of their function to do so, in order to supply nutrition to the parts. These cases are often very difficult to deal with, owing to the necessity for clean stripping at each milking period precluding any possibility of rest.

Further, the trouble often reappears again and again in the same animal after it has been cured, or has ceased spontaneously. In many cases cows that give bloody milk are "stale," that is, they have been too long in milk and need drying off. Any cow whose near approach to calving, or long period in milk, suggests this origin of the trouble, should be promptly dried off, and the bother of treatment saved. It is generally found that after the usual period of rest there is no trouble at the next calving.

When the cow giving discolored or bloody milk has yet a long time to run, something must, of course, be tried to remedy the defect. The food supply, though rarely in any way responsible, should be overhauled, and such changes made in the diet as the result of the investigation suggest to be desirable.

#### TREATMENT.

As to treatment, local bathing with cold water, after clean stripping, is sometimes recommended as calculated to give tone to the weak blood-vessels, but where this is practical the udder should afterwards be very carefully dried with a soft cloth, and then gently massaged or rubbed with a little camphorated oil to prevent the animal taking cold in the gland. The best results are obtained in cases of bloody milk from treatment which includes the prolonged administration of tonic medicine containing iron.

A laxative drench of Epsom or Glauber's salts should be given, and followed twice a day with one ounce or one sixteenth part, of a mixture of four ounces each of carbonate of iron, common salt, and powdered aniseed and gentian. This powder should be stored in a covered tin and give in the food, or as a drench in a quart of ale or thin gruel. In cases of discolored milk it is often useful to give a drench of:—Nitrate of potash, one ounce; powdered ginger, half ounce; Epsom salts, twelve ounces; ale, one quart, and follow it twice a day with one ounce of hyposulphate of soda, dissolved in a quart of warm water. The milk from the quarters, the product of which is normal, should be kept separate, and the discolored and bloody milk received into a different vessel. There is a superstition among cow-men that any abnormal milk should be stripped on to the ground. This certainly secures that it shall not be used for human consumption, or spoil the bulk, but milk so distributed taints the premises and furnishes a breeding-ground for germs that cause putrefaction and decay, if not for pathogenic organisms.

Generally there is no risk whatever in giving bloody milk or discolored milk to pigs. They appreciate it none the less on account of its appearance; but, in any case, it is better received

into a vessel, even if eventually thrown down the drain, than milked on the floor of the cowshed.

In those cases where blood, as blood, comes with the strippings, the milking should be conducted as gently as possible; but clean stripping must not be omitted because the milk is bloody, or there may be worse trouble in the shape of mammary inflammation from retention of the milk, or the cow will go dry.

M.R.C.V.S.—in Mark Lane Express.

## POULTRY

#### Keeping Shells for Feeding.

In winter, all kinds of fowl require to be provided with grit as they cannot have free access to sand and gravel as they have in summer. This grit is required to grind food in the crop and so aid digestion. For this reason, the following question by L. W., Alta., is to the point: "Are eggshells gathered in summer and kept until winter, then crushed and fed, of any value to hens?"

Eggshells are both a grit and a food. Their hardness and brittleness exercise the mechanical function of grinding food and their chemical composition furnishes the fowl with the elements required for making shells. Frequently, hens will lay softshelled eggs in winter just for the want of such material in their food, and often the lack of shellmaking material delays them in laying. No better use can be made of shells than to collect them during summer and feed them to fowl when they are not in a position to get other grit. A good plan is to have an old barrel in which to throw the shells and when ready to use them feed them with the mash or mix with other grit and keep it before them all the time.

#### A Seasonable Talk on Poultry.

EDITOR FARMER'S ADVOCATE:

Having early in July to divide my flocks one and two year old Barred Rocks leaving one third of them at the The Hermitage and bringing the rest down to their new home The Littlecote Poultry yards, St. Charles, I have been quite surprised by the effect the change has wrought in the flock as regards their moult. They were moved to pastures new, fresh ground hitherto "unscratched by the claw of hen" and at first laid well, then nearly went on strike and began to moult very freely, so by September they were well clad in a nice new coat of feathers; now they are expected to do their duty bravely all winter filling the egg basket. The Hermitage contingent, however, laid more eggs in August and are only moulting now, both flocks having the same feed and unlimited range over plenty of grass—in passing I may remark, as a proof of the healthfulness of poultry in Manitoba that chickens have run on The Hermitage Range for about forty years without any outbreak of a contagious nature.

As a rule, to get back to my subject, the early hatched pullet catches the first worm, lays the first autumn egg and moults the first feather. Good feeding is essential when the moult is on, as 'tis certainly weakening. One of my old ladies had to be helped to bed several nights. Wheat, barley and oats all mixed makes a nourishing food. Mash, I do not feed during the summer months except as a change at moulting time when a little "venetian red" is added as a tonic. Milk, sweet or sour, is fine for them now, helping to grow new feathers—plenty of grit and some animal food if on a range where frogs and grasshoppers do not abound. Judging from reports both east and west, this season of 1907 has been decidedly poor for both chickens and turkeys, cold and damp weather having a bad effect on them all, therefore eggs and poultry will command higher prices than ever this winter.

Personally, the writer had splendid success, raising a good number of fine birds without trouble but having moved near an erratic old bachelor neighbor who keeps something like nine viscous dogs, all with their teeth set for spring chickens, my loss has been dreadful. Mrs. Cooper of Treesbank, also, writes of fine luck, "300 young birds the finest she ever had". The backward spring made the general farmer's flock very late as a rule, therefore market chickens are small. Now comes the time for a general

house-cleaning in poultry houses and yards to prepare for winter and the winter layers must be culled out and got in good shape for filling the egg basket later on. Mend all broken windows in the old farm coop and mend up cracks and crannies. Have the nests darkened a little if possible and be sure they are clean with fresh filling in them. If vermin are found on house or on hens get rid of them at any cost as badly infested hens will neither lay nor thrive. A good cheap insect powder is air-slacked lime 2 parts, flower of sulphur one part and carbolic acid one part, all sifted together; a few dustings with this and a clean coop will make the flock more comfortable and profitable.

Any hens that have not finished their moult by Nov. 20th discard from the laying pens as as no winter eggs will be forthcoming from these. As cold weather comes on keep the laying hens as hardy as possible, giving them a daily run till snow comes, when they are better in the house or scratching shed, but always give them fresh air in abundance and sunshine. 'Tis surprising what a lot of oold they can enjoy under these conditions, with good scratching material to exercise in—at night they want to be comfortable, however, free from draughts, and a curtain in front of the roosts is useful though I have never found it necessary to use one in my houses. During the next few weeks a good supply of grit and gravel should be stored for winter—unsaleable cabbage can be put in barrels in the cellar and beets and mangels, turnips etc. can be saved for green food. Clover is splendid if a supply can be had. Cut clover steamed is much relished in winter. A farmer is wise to save a load or so of grain unthreshed to give the laying hens, providing feed and scratching material at the same time.

In conclusion I advise anyone who has artificial heating to do away with it altogether making the houses comfortable in other ways. Good banking is a help and either double windows or wooden shutters over the windows]

Littlecote, St. Charles. H. E. VIALOUX.

## Horticulture and Forestry

#### In British Columbia Fruit Valleys.

EDITORIAL CORRESPONDENCE

The first point for a man from East of the Rockies to thoroughly grasp when considering the purchase of ranch in British Columbia is the absolutely different state of conditions prevailing in the western province. In the first place (speaking now of the three main inland valleys, the Okanagan, Arrow Lake and Kootenay) farming is essentially intensive as opposed to extensive. A square foot of waste land in these districts is as much loss to a ten or twenty acre lot as a waste acre in a large farm or ranch in the Northwest. Every foot of space that can be utilized by the Okanagan or Kootenay or Arrow Lake farmer must be considered almost as carefully as inches are in the demarkation of lots in a huge city.

Secondly, whilst in the prairies one quarter section is, broadly or generally speaking, as good as its neighbor, here in B.C., a first class ten or twenty acre plot may be bounded by rocks and cliffs which no sane man would dream of attempting to cultivate. This consideration makes it practically imperative for an intending purchaser to view through his own eyes or those of a thoroughly trustworthy friend the lot which it may be proposed to acquire. If this is an impossibility then one should insist upon answers to such questions as, what is the mean altitude of the lot, what is the greatest drop or difference in altitude occurring on the lot, what is the aspect, does the slope face north, south, east or west, does the mountain rise immediately from the confines of the lot and on which side or sides? Another most important consideration is the access to water and a main route of communication, either a lake or a road leading to a town or a railroad depot. Once at either a town or depot little or no difficulty should be experienced in getting to market.

The third point to make up one's mind to is the physical impossibility of farming, with very rare exceptions, large tracts, for such rarely exist and, if they did, the nature of the crops like strawberries and such soft fruits demands a larger number than is available of pickers, per acre, at the time of harvest. Taken all through, then, one should make up one's mind to be content with at the most a one hundred acre ranch and on that not more than ten should be under soft fruits and vegetables and the balance be planted only with trees bearing apples, plums, cherries and so on. But a ten to twenty acre ranch is the more general size.

Price. You will find lands offered at all prices from \$10.00 up to \$500.00 per acre. Think of it! Five hundred dollars for each acre! And in general you