

The Farm

Why Butter Spoils When Exposed to the Air.

Several times during the last year I have had specimens of butter brought to my notice that were of fine quality, but had turned strong on the top of the package next the air. In nearly every instance of this kind the butter was simply covered with a cloth, with no salt. With these facts I shall undertake to explain the real reason why this butter spoiled as it did.

If we shall take up the question from the start, we shall find that there are two kinds or classes of bacteria concerned here. In the cream, and also, of course, in the resulting butter, there are the group of lactic acid bacteria and also another group containing germs of varied influence on the product, but among them, and this is what is to be considered here, are the putrefactive bacteria, or the germs of spoiling or decay. These latter organisms are known to the bacteriologist as aerobic germs; that is, they find the best condition for growth when atmospheric oxygen is present.

Butter, when freshly made, contains very little, if any, air, and it is only by exposure that any gets into it, so that we have here the reason why the butter which was in immediate contact with the air, through the meshes of cloth, spoiled first, since the bacteria, which were the resource of the spoiling, could develop there, but could not develop in the centre of the tub.

To prevent the access of air to butter, the tub should be lined with parchment paper, and the top of butter should also be carefully covered to the sides of the tub with it, and then a good layer of salt put on the top of this, for I have found that there is seldom any trouble with spoiling if these conditions are fulfilled.

In conclusion, I would say that the practice of treating parchment paper with strong brine before use cannot be too strongly recommended, for by so doing the growth of moulds and many other troublesome germs is to a great extent prevented.—(S. C. Keith, Bacteriologist, in Farm, Field and Fireside.

One Reason for the Scarcity.

The very decided scarcity of young beef stock on the other side of the line (as also here in Canada), is having the effect of attention being called to a cause for it which at first sight would escape notice. During the past few years the tendency has been to market calves and yearlings instead of maturer steers, for apparently it is much more profitable to do so. But when this course is pursued, to make as much aggregate gain as before a larger number of head must be kept, and provision must be made for this increase of the producing herd. For example, suppose the average fattened calf or yearling steer weighs 800 pounds, and that the mature three-year-old steer weighs 1,600 pounds. It is evident that to supply the community with the same quantity of beef will require, in the one case, twice as many cows to be kept as in the other. This increase in the number of cows has, as a rule, not been provided for. On the contrary, the depressed prices which have prevailed for beef during the past few years have had the effect of frequently causing the young heifer calves to be sacrificed. The candle thus has been burnt at both ends. The males have been killed off more quickly than usual for market purposes, and the supply of dams has been shortened by sacrifices. The present effect, however, of this shortage of beef cattle, so far as Canada is concerned, will be a very decided strengthening of beef cattle prices. Already we hear that the American buyer is relying for his stock upon what he can get upon our side of the line. We have ever-

reason for believing, therefore, that better times are in store for our beef cattle producers, and therefore for our producers of purebred beef stock. That these good times will be welcome goes without saying.—Sel.

Turkeys in Summer and Autumn.

Through the summer turkeys will not require much food save at night to keep them in the way of coming home. They are great foragers, and insects, nuts, seeds, garden produce, etc., keep them in good condition. If your area is small and your neighbors particular, it is best to exercise great caution that they do not destroy crops.

When the flock breaks up in the fall by the males and females dividing, you may begin to increase their rations of food, but as they fatten very quickly do not feed strongly until a month before market day. Then keep them busy at home, remembering not to feed more than will be readily eaten at once.

As killing time draws nearer feed oftener. Give a variety. Don't depend on corn alone, and don't expect to make good turkeys with sour damaged grain. Select the best "hens" for breeding purposes, and do not sell those or exchange for poor stock. Purchase a new male every year, and don't take everyone's advice on how to grow turkeys. Find out for yourself.—American Agriculturist.

Keep Air in the Soil.

We have often called attention to the evil of driving the air out of the soil by flooding with water, but there is another way of driving out the life giving air without drowning it out, and that is in working the ground when it is too wet. Stirring wet soil kneads it into compact masses, driving the air out of the interstices, which should always remain between the earth particles. This produces a puddled or baked condition. For the same reason, as soon after watering the growing crops that require cultivation as the soil is in proper condition to work, a suitable implement should be used to pulverize the surface over which the water flowed, which will again permit the air to enter the soil. In all crops requiring cultivation, the surface of the soil cannot be kept too finely pulverized.—(Field and Farm.

Plum Trees.

I saw some plum trees loaded with fruit the other day, and what struck me as strange, the trees were also loaded down with iron rings, hoops, chains and kettles, and numbers of yeast-powder bottles half-filled with sweetened water and dead insects. What could it all mean? "The bottles of sweetened water were to catch insects when on their way to sting the fruit," I was told, "and all the old bits of iron to keep the fruit from dropping off." Now I can understand how an insect should prefer some sweetened water to a half-ripe plum, but must confess I cannot understand why old iron should keep plums from falling. But some one comes to the front by saying "that insects in trying to pierce the iron, become discouraged and fly away to other trees, which offer no such impediment." If such be the fact, it must be a very good thing to do, and worthy of being imitated, as there is great profit in plums if they can only be coaxed to remain on trees until ripe. There is no preserve more delicious or more stimulating, and plums of all kinds command good prices at any time. I remember that my mother had, in a village garden, two yellowage trees, two blue plums, and one gray one, and that we were always supplied with good plum preserves, besides having several spare buckets to sell. Soil adopted to apple trees is generally good for plum trees.—Mrs. A. E. C. Maskell.

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