

of necessary and unnecessary flavors are given off, and in erecting the milk or cream cellars in the neighborhood of stables or other places where all sorts of miasmatic or other obnoxious effluvia are given off, especially in summer.

4. **OILY (SOUR-OILY) BUTTER.**—According to all accurately conducted experiments, this mistake is entirely due to mismanagement in souring the cream. It is specially noticeable when, in order to sour the cream, old cream or sour butter-milk has been added. In all probability the decomposition of milk sugar into lactic acid, in such cases, takes place in an abnormal manner. Factories in which the above method of souring the cream had been employed produced a very oily butter, but this condition disappeared when the souring process was changed by using fresh soured whole milk.

5. **GREASY BUTTER.**—This condition takes place after the butter has been stored for some time, when it partakes of a tallowy or lardy flavor. At the same time the color changes white and tallow-like, particularly from the covering into the interior, which can also be observed when the butter is placed in the sun for some time. The cause of this failure probably lies in souring the cream too much, by which the decomposition of the casein and the butter fat is already far advanced only to be afterwards still farther increased. The white color is probably due to this advanced decomposition of free fatty acids, which, in their turn, produce a change in the butter fat. Careful observation of the souring process, and scrupulous cleanliness with all the milk vessels, are the means of preventing this undesirable result.

6. **FISHY, BLUBBERY BUTTER** is a failure observed in old samples. The fodder may play a part in the production of such butter, such, for example, as the feeding of large quantities of oil cake, which changes fine butter into that of a blubbery nature; but it is also very probable that this failure is caused chiefly by improper handling of the milk and cream, the former not being kept fully sweet while the cream is rising, or being too strongly soured; principally, however, on account of faulty methods of souring the cream. The same remarks apply here as in the case of tallowy butter.

7. **BITTER BUTTER** is partly caused by a bitter taste in the milk, which is particularly the case with the milk from cows a good while after calving; but it is also caused in part by certain substances in the fodder, such as sometimes found in lupine, also by spoiled foods, and by changes from stall to pasture feeding, or pasture to stall feeding. It is also highly probable that bitter butter can be produced by mismanagement of the milk and cream.

8. **SPECKLED, STREAKY BUTTER.**—In colored butter this is caused by the coloring not being evenly distributed, the butter being interspersed with lighter and darker shades; but the cause also lies in imperfect salting or working. When the salt is not worked evenly, the percentage of water varies in different parts of the butter, the salt drawing moisture from the surrounding parts in order to be dissolved. The parts having the greatest quantity of water have a darker appearance than those with a lesser quantity, which causes the appearance above mentioned.

9. **MOULDY BUTTER.**—This takes place soon after the butter is packed, and is caused by a fungus, which, however, can easily be removed, but a disagreeable taste is imparted to the rest of the butter. During the life of the fungus the

butter undergoes decomposition, and sooner or later propagates itself over the contents of the firkin. Keeping the tub moist before and after packing is said to be the cause of the failure.

10. **RANCID BUTTER.**—This is the most commonly known of all the failures in butter making. The rancidity originates in the butter which is in contact with the wood of the tub, and spreads into the interior until the whole contents of the firkin is spoiled. The progress can easily be ascertained from time to time by the butter tester. It was at first supposed that the rancidity of butter was caused by its coming in contact with the staves of tubs, it being believed that the butter would absorb some substance from the wood that would give it this flavor. The spoiling was therefore attributed entirely to the mismanagement in the preparation of the tubs. Undoubtedly a bad tub may favor rancidity, but it is not the only cause, the quality of the butter having considerable to do with it. A good quality either never becomes rancid, or, at any rate, is much less liable to do so than an inferior article, and therefore here also care in the production is the best way to guard against this failure. The fact that the rancidity commences at the outside is due to air coming in contact with it there and decomposing it, or at any rate causing free butyric acid to be formed. Carefully soaking and drying the tubs and thoroughly sprinkling the sides with salt before packing the butter, and then storing it in a dry cool place, are good safeguards against this failure.

Dr. Sturtevant, of the New York Experiment Station, relates the following piece of his experience: The constitutional character of cows differs greatly, and the practice of feeding which may be injudicious for the average cow may be apparently not productive of harm when applied to an animal of strong digestive powers. Thus in my own herd, in which a careful record was kept of the amount and character of the food for a series of years, it was found that while some cows could be fed eight quarts daily of cotton-seed meal for a long period without apparent injury therefrom, yet the average feeding of this material could not be in excess of two quarts daily, with other food, without the appearance in some animals of ill results, and the feeding of four quarts daily to the herd resulted in the death of two animals. The feeding of grain or of a highly nitrogenous food is always dangerous when carried to excess. Thus we all know that if a cow gets loose at night and obtains access to the grain bin, injurious effects are likely to follow, and we never think of calling the meal poisonous in these cases. In like manner the over-feeding of cotton-seed meal, one of the most valuable foods for the dairyman to use (not to abuse), is apt to be followed by injury.

A Pennsylvania farmer, in the Ohio Farmer, says: "We haul out in winter on sleds, spread as evenly as we can, the snow making it easier to do this. I would not advise spreading on hilly lands. Those having level or gently sloping fields will save valuable time in the spring by hauling on snow; it is easier to load and one can haul larger loads. There is practically no loss if hauled every few weeks or oftener, if carrying plenty of stock. One of our most successful farmers hauls manure every few days, spreading as fast as hauled. This saves extra work, and I believe gives better returns; I have had good results from this practice on clover sod for corn."

## The Farm.

### Couch Grass (*Triticum repens*.)

This hardy and troublesome weed is known under a large number of different names, such as Quack Grass, Quick Grass, Quitch Grass, Witch Grass and Welch Grass. The head of this plant somewhat represents that of rye grass. The main difference between the head of the rye grass and couch grass is that the former presents a flatter appearance than the latter. The couch grass may also be very readily detected by its roots. They are jointed or divided by nodes sharply pointed at the end; from each of the nodes or joints roots may grow, and, if broken, each one of them may grow and become a separate plant. The roots are creeping and are the underground stems of the plants. It spreads very rapidly, and, if not checked, will soon occupy whole fields and farms.

In some localities where it has taken firm root a large number of farmers have allowed it to grow, using the infested fields as permanent pastures. Some also cut this grass for hay. When it is cut early, it is said to be very nutritious and well liked by horses and cattle. It is, however, a bad plan to allow it to grow on the farm, as it will keep spreading continually, and will therefore require a continual warfare to keep it within its limits. A good method of destroying it is to smother it out with buckwheat or clover. In bad cases it may be necessary to grow two successive crops of buckwheat in one season, plowing them both under when in blossom, and continue with a hoe crop the next season. All crops that are intended to smother this grass should be sown thickly, and immediately after the land has been plowed and harrowed, in order to give them a good start before the grass appears. Hoe crops used alone have also been found very effectual in overcoming this weed. When this crop is to be used it is advisable to manure and plow the land in the fall, cross plow it in early spring, and again plow it once or twice, according to the nature of the crop to be sown later on, the last plowing always to be done just before the crop is sown. The grass has to be kept down perfectly, so that it never sees daylight, even if it would require cultivating once every week. The success depends largely upon the thoroughness with which the grass is kept down, but the season and soil have their influence. Bare fallow, or rather, bare cultivation, is also recommended. For this purpose, the soil is plowed early in spring, and cultivated as often as the grass appears, or about every week, the turned down sod to be torn as little as possible until about mid-summer, when, with a deep cultivation, it is brought to the surface. From here it has to be removed by raking it into a heap, or gathering it up. It is, however, better, if possible, to dispense with the bare fallow, as it may not do the work so thoroughly, and is more expensive.

The best medicine for horses in the spring of the year is thorough cleanliness, which keeps the skin active, aids perspiration, and thereby conduces to the health of the animal.

To get rid of warts on the cow's teats, cut the small ones off with the scissors, and tie a strong thread tight around the base of the others, and let them dry up and drop off.