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THE FARMER'S ADVOCATE

can keep foods cold enough you need take little thought as to whether they shall spoil. In summer, on the other hand, yeast and mould germs and bacteria are everywhere, floating through the air, busily engaged in working wherever sufficient warmth and moisture warrant their growth. Very tiny indeed these "germs" are; little micro-organisms too small to be seen with the naked eye, yet none the less real for all that. Under a strong microscope you may see them plainly enough, resembling little rods and spirals, and "worms" of all sorts, although scientists tell us their nature is of plants rather than of animals.

At any rate they grow and reproduce with tremendous rapidity, working good or ill as their species may direct. Some of them cause milk and cream to sour, and develop the peculiarly pleasant flavor of good butter and cheese; others make fruit ferment; or, if over-developed, cause bread to sour; yet others work worse destruction, causing decay and putrid odors and disease.

For this reason, then, the question of how to care for food becomes very pressing in hot weather, and perhaps, to-day, we cannot do better than give you a few hints from a bulletin issued last year by the U. S. Dept. of Agriculture.

Molds, yeasts and bacteria, says the writer, may be found in the cleanest room, but they exist in far greater numbers in dirty quarters; where, for instance, crumbs of food have been allowed to decay and dust to accumulate. Not only do the micro-organisms appropriate our food, with the result that the food sours, rots, or putrefies, but they sometimes, in addition, leave behind disagreeable consequences, like the musty and moldy odor and flavor of some spoiled foods, or the substances called ptomaines, which are sometimes poisonous. The housekeeper's success in preserving food from deterioration depends very largely on her ability to reduce the number of these forbidden guests to the lowest possible limit, hence the science of bacteriology has given us a new meaning for the scrubbing, airing and sunning that for many generations good housekeepers have practiced.

Yeasts grow best at a temperature of 70 to 90° F.; therefore food that is to be protected from their action must be kept well below this point.

The first requisite to prevent molds is absolute cleanliness in the storage place. This is not to be attained by the use of soap and water alone. Fresh air, sunshine and whitewash are important aids. Shelves should be washed clean and dried; but the undue use of water should be avoided, as moisture is one of the chief requisites of growth. A cellar may be kept dry by placing in it dishes of unslaked lime. When the lime crumbles apart it will take up no more moisture and must be renewed.

To keep fruit, rub it with a clean cloth—this applies more particularly to apples in fall—then wrap each in soft paper and store in a cold place.

To Check Bacteria:—Since succulent fruits, milk, raw meat and meat products are especially subject to bacterial action they must be given unusual attention. They should be consumed as soon as possible after purchase, or subjected to the following conditions: Utensils that come in contact with them must be scalded or boiled. The hands and clothing of the worker must be kept clean. Of cooked foods, moist vegetables, cooked fruits, moist-made dishes, like meat pies, are particularly liable to "spoil," and the importance of clean utensils, of keeping the foods protected from dust, etc., cannot be too often pointed out. . . . The temperature at which food is kept should be reduced to that best suited to it, which is usually as near the freezing point as possible. A good ice-box will keep such food for days in perfect condition. . . . Since bacteria develop well in moisture we may preserve some foods, such as fish, meat, vegetables and fruit by drying them, often in combination with salting and smoking. . . . Again by exposing food to 150 to 160° F. of heat for half an hour all varieties of bacteria are killed except a few that are very resistant to heat. The pasteurization of milk, canning of fruit and vegetables, are examples of foods kept from spoiling by this method. . . . Most varieties of bacteria are killed in a few hours by direct sunshine, hence the necessity for sunning

and airing of rooms, milk vessels, dish-cloths, etc.

Lastly, we may often make use of substances, such as heavy sugar syrup, vinegar, spices, salt and wood smoke, all of which do not support bacterial growth.

PTOMAINE POISONING AND DISEASE GERMS.

Often very slight bacterial growth is sufficient to cause what is called ptomaine poisoning, which may be violent, or may result in summer complaint. Certain apparently mysterious cases of illness have been traced to such sources, and milk, fish, meat, cheese, baked beans, ice cream and other foods have all been found responsible for "food poisoning." Hence the necessity for having food either entirely fresh or absolutely well preserved is apparent.

The so-called "germs" of typhoid fever, diphtheria and tuberculosis are bacteria, and as they may be conveyed by means of water or food this danger is a very real and very serious one.

The germs of typhoid fever are voided in the feces and urine of the patient. Because of carelessness or ignorance in the disposal of these excreta, they find their way into brooks, rivers and wells. Such water when drunk or used to wash milk cans may readily cause typhoid. The germs are also distributed by carelessness from the hands and clothing of persons nursing typhoid patients. If any of these germs find their way into milk, they develop with wonderful rapidity, so that milk becomes, next to water, the great carrier of typhoid. Flies and dust are also disease carriers, and every precaution should be taken to prevent their existence.

If the water supply is not known to be well guarded from pollution the existence of a disease like typhoid fever in any locality requires that all water be boiled to destroy bacteria in it, and that this boiled water be used not only for drinking, but also for cleaning the teeth and washing fruits, vegetables and dishes.

A FEW PRACTICAL RULES.

1. As dust is a bacteria-spreader, keep it down as much as possible while sweeping by using bits of damp newspaper or sawdust on the floor, and before sweeping cover all food and dishes, leaving them covered for some hours, as the light organisms will be floating about in clouds for that time. Use a damp cloth for dusting.
2. Exercise scrupulous cleanliness in all operations connected with the dairy. Milk in a clean grassy field, or in a stable as far as possible dustless; hands and clothes of the milker to be clean; udder and flanks of cow to be wiped off with a damp cloth before milking; all milk vessels to be washed with cool water and washing soda, then scalded and sunned inside; milk to be cooled as quickly as possible and kept cold until time of using.
3. Wash very carefully any exposed foods bought in stores, such as dates, figs, etc. All of these, you may be sure, have been exposed to dust enough at some stage of their existence. Patronize the grocer who exercises cleanliness in his shop.
4. Grow your own vegetables, and so be sure that they are fresh and clean.
5. Have a well-drained cellar, with cement floor and plenty of windows to secure good ventilation. Partition off a room or cupboard for such foods as must be kept dark, but air it frequently. Keep the whole cellar scrupulously clean.
6. Wipe the inside of the refrigerator every day with a dry cloth, and once a week thoroughly scald the sides, shelves and drain. Do not let food come into actual contact with the ice, which may not be pure. Always empty any opened canned goods into a dish before putting in the ice-box.
7. If you have not a refrigerator, you may make a cool-box in this way: Take a wooden box with a sound bottom and invert it. Tack a layer of cotton batting over it and cover with coarse cloth. It is now to be kept wet constantly, so you may suspend over it a dish with a few very tiny holes in the bottom, filled with water, letting enough drip through to keep the cloth saturated. Under this box place butter, etc., which you wish to keep in good condition.
8. Keep rice, tapioca, etc., in covered cans or small crocks in a dry, clean place; or in glass preserve jars, which are best of all.

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