

The Farm.

Feeding the Dairy Cow.

When properly fed a dairy cow will neither gain nor lose in live weight, and under such conditions will produce the maximum quantity of milk which her physical conformation permits, and that milk will have its maximum quality, i. e., there will be a maximum epithelial growth.

The food which produces such results is an ideal milk ration, and the nearest approach to it which man possesses is a good pasture. The moment artificial feeding begins the conditions are altered. If an excess of nutriment is given the tendency to fatten will gradually outstrip the tendency for milk production. If a deficiency of nutriment be given the body suffers first, subsequently the quality of the milk, and, lastly, the quantity. These results will be most marked when there is simultaneously an abundant supply of water. If now the food be changed there will be a corresponding change in the quantity and quality of the milk, but it will not be immediate. Experiments have been made for me under the latter conditions. The result was that the animals first utilized the food to replenish their emaciated bodies. The milk remained practically unaffected for from four to six weeks. Then the food told. This fact emphasizes one source of error in feeding experiments—they are not conducted on a sufficiently long period.—(Professor F. J. Lloyd before the British Dairy Farmers' Association.)

Flies in the Dairy.

With our advanced knowledge of dairy and other bacteriology we are now aware that this element forms a distinct menace to the purity of our dairy products. Dr. Schultz, the eminent bacteriologist of Berlin, has submitted thousands of flies to microscopic examination, and his results and conclusions are simply surprising. The fly's foot is shaped like the mouth of a trumpet. The circular portion secures a grip on a flattened surface. The vacuum being complete, seeing the trumpet-shaped foot is hollow, a firm hold is thus secured, and a fly can walk up a perpendicular pane of glass as readily as it can travel over one lying horizontal.

In the hollow of the trumpet-shaped foot is a space which forms a receptacle for bacterial life. The doctor found microbes in the feet of about 30 per cent of the flies caught in the country, and in the city about 40 per cent. In the hollow of one foot alone he discovered over a hundred microbes. It is known to all how flies will walk over and revel in filth, dirt, dead flesh and other vile matter. The foot retains the objectionable germ life which is the cause of putrefaction. On getting into the milk they convey to or inoculate it with an hostile element which tends to affect flavor and aroma detrimentally. We should zealously guard against this evil, and freely recognize the importance of keeping the flies out of the milk and cream.—(New-Zealand Dairyman.)

Mustard for Garnishing.

Few people realize what a treasure the Giant Southern Curled mustard is for garnishing when well grown. On rich soil where moisture is plenty the leaves grow to great size and are beautifully crimped and ruffled along the edges. One large leaf torn in two lengthwise will often be sufficient for an ordinary sized platter of cold meat, as only one layer of leaves can be used on account of the edges being so full and wide. Many people like it as a sort of relish to the meat, and if young, tender leaves are selected they are very tasty. It grows readily from seed, sowing itself, so that when once planted it continues to come up year after year. It does not kill easily with frost and can often be found in good condition for use as late as November.—(Vick's Magazine.)

Keeping Ants out of Beehives.

Following is the plan of an Arkansas correspondent of American Bee Journal: Drive four stakes of old gas pipe (wood

will do) into the ground the height you wish the hives to stand. Put the bottom boards on them, clean out all grass or weeds and take some candle wicking and saturate with coal oil and bind around each post so that the ants cannot ascend without crawling over it, and I guarantee none will get into the hive. When the wick gets too dry, saturate again.

Brooder Thermometers.

Not only are the practical poultry raisers making larger and larger use each year of incubators and brooders, but we find farmers coming more and more to make use of these aids to the early hatching of pullets and the toothsome broiling cockerels. Getting the chicks out in early March makes it possible to sell the young cockerels in midsummer at the summer hotels at as great a profit as could be obtained from them if kept and fed until Thanksgiving time, while the pullets catch the cream of the year's egg prices by commencing laying in the fall. Many farmers are using both incubators and brooders; but more are to be found who hatch by hens and then put the chicks into homemade brooders. Now, it is possible to make excellent homemade brooders, as I know by experience, but those who make their own brooders are quite likely to make the mistake of either using no thermometer whatever or of depending upon the cheap affairs that are sold for a trifle in the stores. A brooder should not be run without a reliable thermometer. It is folly to hatch out chicks and then risk spoiling them by over heat or under heat in the brooders. But where one has half a dozen or more brooders the purchase of a reliable glass for each makes quite an expense, especially in view of their liability to breakage. A way out of the trouble is this: Have one reliable, tested thermometer. If one is running an incubator also the incubator thermometer may be used. Buy the necessary number of cheap thermometers and paint their graduated scales white. Then, when dry, put them with the tested thermometer, and mark the divisions of five from seventy up to ninety-five, putting them all for this testing into the incubator chamber or other place where a steady graded heat can be secured. These cheap thermometers thus become tested thermometers, and can be relied upon. They are not thus tested by a reliable thermometer at the factory where made, but are turned out by the hundred; one is tested and the scale marked for all the others by that. The result is a variation of from one to perhaps six or seven degrees. Don't try to raise chickens in brooders without knowing just what the temperature is within the brooder chamber.—(D.)

How to Fight Plant Lice.

Bulletin No. 139 of the New-York Agricultural Experiment Station (Geneva) will be found most helpful to the orchardist or small-fruit grower, if plant lice are as numerous this season as they were during 1897. The lice which were so injurious during the last season belong chiefly to three species, one affecting the plum and two the currant. The bulletin gives a complete description of these species with a full account of their most interesting and most peculiar life history. The lice are sucking and not biting insects, which live upon the juices drawn through their pump-like mouth parts from within the tissues of the leaves or young growth. They cause the leaves to become distorted and curled up, and are thus protected so that remedial measures are ineffective unless applied quite early in the season. As they do not eat the outer tissues, paris green and such poisons are ineffective, but kerosene emulsion, whale oil soap solution, kerosene-water mixture, tobacco decoction or some other contact poison must be used. If these are applied thoroughly, beginning as soon as signs of the lice appear, they may be kept in check. If treatment is delayed until the leaves are curled up it will be necessary to cut off the worst affected leaves and spray those remaining. In ordinary seasons little damage is to be expected from the lice as their natural enemies, the larvae of the syrphus flies, lady-bird beetles and larvae, aphids and ichneumon flies keep their numbers well reduced, in spite of their exceedingly rapid rate of increase.

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