

DAIRY ROOMS.

We have received from the publishers, Porter & Coates, of 822 Chestnut street, Philadelphia, a neat pamphlet entitled "Butter and Butter-Making," by Willis P. Hazard, President of the Chadler's Ford Farmers' Club. It is published at the nominal price of 25 cents, and is certainly worth the money. It gives the method pursued by those butter makers who supply the Philadelphia market with the "print butter" which reaches the high prices. Although written for Eastern dairymen and fitted to Eastern conditions there are many suggestive points for butter makers everywhere. We quote a few paragraphs on the care and fitting up of dairy rooms:

Everything must be removed that will impart impure odors or taint the atmosphere of the dairy room, and thus injure the butter. The shoes of the dairyman should be removed when coming from the barnyard, and exchanged outside the spring-house door for another pair kept there for the purpose. Otherwise it would be impossible to prevent carrying in sufficient filth to taint the atmosphere and communicate it to the milk. Another source of injury to the taste of butter is the imperceptible odor from kerosene lamps, which have often to be used in the dairy house. This can be obviated by having the lamps set in sockets, and a pipe leading outside placed over the top of the chimney, which will carry off the odors. Or a box containing the lamp and reflector can be so constructed, either built in the wall with glass front on the inside of the house and opened only from the outside, or arranged in the window. It should project on the outside in either case, so as to be readily reached from the outside, and should have a pipe for the exit of the smoke. It is most important to have pure air, and that the milk room be clean, cool, dry, airy and well ventilated. The temperature should range about 60 to 65 degrees, never higher than the

trough which will carry the water to the dairy house any distance it may be placed from the house; but the nearer the better, so that the water shall not warm in its passage. If it is introduced in the center of one side, the gutter should slope both ways to the corners, and following the sides, be allowed to escape at either far corner through a pipe built in the cement. These escapes should be furnished with plugs to hold the water, so as to allow it to be changed once or twice daily.—*Rural Press.*

FOOD FOR MILCH COWS.

The Superintendent of the New Hampshire Agricultural College, says the *Western Rural*, has completed some interesting and important experiments on food for cows, in which it was ascertained that in feeding bran to cows in lot No. 1, and corn-meal to cows in lot No. 2, the cows fed with corn-meal gave the most milk, or the greater increase, and decidedly more and better butter; also that they were kept in better condition, as shown by the scales.

The food was reviewed for March. The cows that had corn-meal for February were fed on bran for March. Lot 1 on corn-meal and lot 2 on bran.

Yield of lot 1 for March, 36 11-31 pounds milk per day.

Yield of lot 2 for March, 31 16-31 pounds milk per day.

Lot 2 lost .65 more than lot 1.

Lot 1 made from 175 5-16 pounds milk, 61 pounds butter.

Lot 2 made from 178 1/2 pounds of milk, 51 pounds butter.

Weight lot 1, April 3d, 2,056.

Weight lot 2, April 3d, 2,117.

Weight lot 1, March 3d, 1,900.

Weight lot 2, March 3d, 2,024.

That the comparative effect of the two foods on the butter product may be seen, he gives the amount of milk required under the changes to make one ounce of butter.

INSECTS EATING OAK BUDS.

A writer for the *Modesto Herald* gives an interesting item concerning the oak buds of Stanislaus county, but we do not think there is ground for the analogy he draws between these facts and the fruit tree troubles. He writes: In the *RURAL PRESS* of June 16th is a complaint of the "Fruit Trees of Santa Barbara" as to general behavior, and the writer asked for the causes of their behavior, viz.: a lack of leaves, of fruit and of downcast buds. Now, in this vicinity there is to some extent the same complaint. Apricots were slow and but few upon the trees, and there is complaint of the plum crop. Also, there is complaint of the almonds. But these apparently similar showings are not what induces me to drop you these lines, but that upon the oaks at the foothills I have noticed that the leaves upon one class of trees, mostly those that assimilate to the white oak of the East, had a backset just as the tree went into blossom. The buds opened and put out their soft and tender green that always rejoices the eye at the promise of the coming verdure and the flowering hillsides. But here they stopped, and in a few days it was evident that the leaves were dying or drying up, while the weather was not hot and the grass beneath was green and growing. Now, as to the cause for all this, upon close examination it was seen that a species of caterpillar common to the oak was literally devouring the fresh buds of the trees. As far as the drought has extended I hear of this pest. The yellow oak or brush, crooked-limbed variety, did not fare so badly, as most every one of these has a swarm or nest of ants within, without and all about them. Between these habitants and the caterpillars there was a vigorous war, and possibly they protected their homesteads; if so, they ought to have a patent.

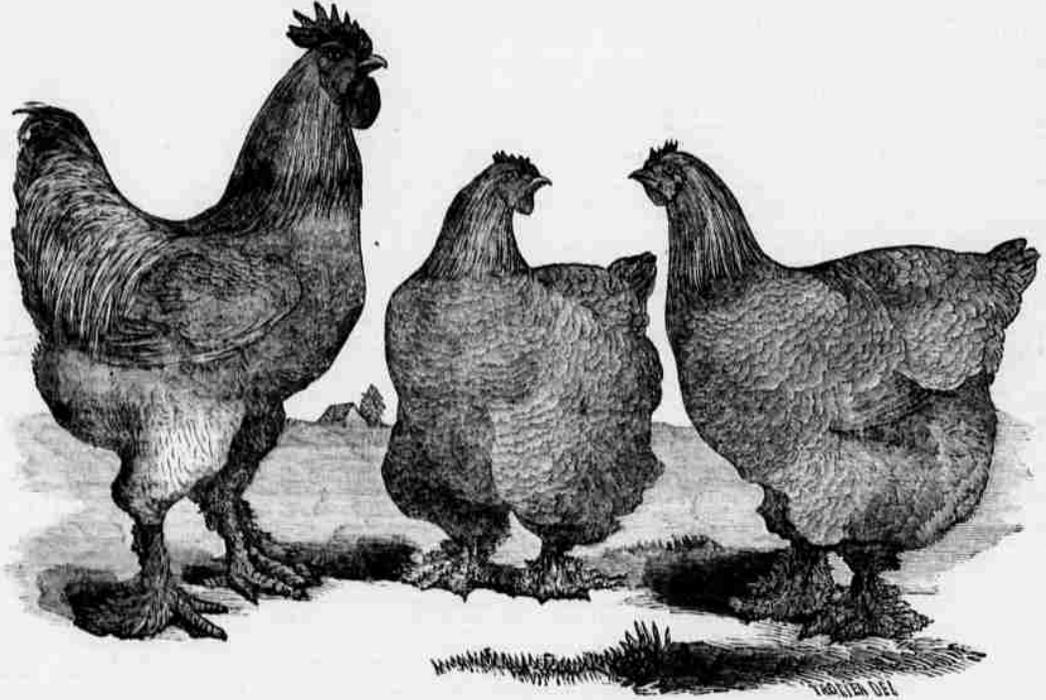
These oaks, like the Santa Barbara trees, are slowly recovering and putting out new leaves.

NOTES ON ORANGES AND LEMONS.

Where the orange first grew is not certainly known. Some classic commentators suppose the golden apples of the Hesperides were oranges. Sir Walter Raleigh brought the first orange tree to England. At Hampton Court there are said to be some 500 years old. At Cordova, in Spain, the seat of the ancient Moorish grandeur, there are orange trees 600 or 700 years old.

"Mr. E. H. Hart, of Federal Point," says the *Florida Agriculturist*, "has a variety of oranges that does not begin to ripen until April, at which time the crop has all been disposed of. The fruit is of a medium size, firm, and juicy, an excellent shipping orange. We already have a species of orange that ripens in August, and it is only necessary to get others to fill up the gaps and we will have this delicious fruit all the year round."

The London *Farmer* has note of the continued disaster which overhangs the Sicily groves. It says: "For nearly ten years past the orange and lemon plantations of Italy, and more especially of Sicily, have been ravaged by a disease known as the 'mal de gomme' or the 'cagna,' and the losses occasioned by it have recently become so serious as to cause considerable anxiety to the growers, and even to the Italian government. The trade in these fruits is one of great importance to the country, the annual exports for some years having averaged more than 800,000 cwt., and the constantly increasing depredations of the disease are naturally viewed with much alarm. A commission of botanists, chemists, and agriculturists was appointed by the government in 1868 to inquire into the cause of the disease, and to suggest a means of exterminating it, but their combined labors have failed to discover the one or the other. Help from any quarter on these points will be gladly welcomed and is cordially invited, while a royal decree has just been published, offering a prize of 25,000 livres to the in-



A TRIO OF BUFF COCHINS.

latter and not lower than 55 degrees, as cream separates best in a cool place. Milk set and kept at a temperature of 40 degrees, will not sour, and the cream will become better before it is fit to skim. If the milk is set to rise in a hot room at a temperature of 70 to 72 degrees, it will very soon become sour and thick, will not yield so much cream, and will make soft, oily butter, which will soon become rancid. The dairy should front the north, and be shaded by trees, so as to admit the light and air, as light is necessary to develop color in cream, but exclude the sunshine and the heat. Evergreens are the best for this purpose, as they cool the atmosphere in summer and warm it in winter.

In many of the Western States where the ground is not so rolling and hilly as some more favored regions with springs, a good spring-house can be made near a well, which will be very convenient and nearer the house than the spring might happen to be. The ground may be excavated about four feet, by some 12 feet square, and a solid stone wall two feet thick laid in cement, and four feet high. The floor inside is laid in cement at the bottom of the excavation, slightly inclining to one corner, for complete drainage and washing. The wall is built up full width, four feet, and then an offset of 18 inches is made to the rear, or outside, where the wall is carried up two feet higher, but only six inches thick, to form the foundation of the frame superstructure; on this is built a balloon frame with eight-feet posts, boarded outside and in, and the wall made as tight as possible. Upon the ledge created by the offset, a narrow wall, about four inches high and wide, is made on the front edge of this ledge, by which, being well plastered with the cement, a gutter or vat is made some four inches deep, and of course 32 inches wide, with a slight descent to the corner opposite to that where the water is introduced. Into this vat the fresh milk is set while warm, and cold water conducted to it from the well. The milk cools rapidly and a low temperature is maintained through the night. At each milking the pans are removed to the shelves or on the cement floor in the center, to make room for the fresh milk. The water can be pumped into a

Let 1 for February, on bran, required 33.2 ounces milk to make one ounce butter.

Let 1 for March, on meal, required 28.5 ounces milk to make one ounce butter.

Let 2 for February, on meal, required 29.2 ounces milk to make one ounce butter.

Let 2 for March, on bran, required 32.4 ounces milk to make one ounce butter.

The Superintendent has also been testing the yield of cream, and with two lots of 112 quarts each of milk, set under like circumstances, as regards temperature and quality of milk, the milk being mixed and divided, one-half after the old method, in shallow, open pans, the other in Harlin's deep and closed pans, the milk being strained into the cans at once, warm, and the cans closed.

One hundred and twelve quarts milk in open pans gave 8 pounds and 10 4-10 ounces butter.

One hundred and twelve quarts of milk in deep cans closed, gave 8 pounds and 13 ounces butter.

BUFF COCHINS.

Buff Cochins are the best fowls for winter layers, the most careful of their young and the hardest to be found in the feathered tribe, with the single exception of the Partridge Coochin, which closely resemble them. The chicks are very hardy, but fledge late, and for two months present an almost naked appearance. They however, at five and six months, rapidly gain in weight and will dress at that age six and seven pounds for market.

The hens, after laying some 25 or 30 eggs, become broody, but are very easily broken of their inclination to sit, by confinement in a small yard with no houses or nests about—three days is generally sufficient, and in 10 days they will commence laying again.

Using Sparks.—Mr. James A. Pea, an engineer on the Montgomery and Eufaula railroad, has invented a spark arrester by which, it is claimed, not only is the escape of sparks prevented, but the sparks are collected in a box by means of small pipes, and can be used to sand the track or for ballast.

continually, and by the fall will have recovered. It may be that upon examination an insect will be found in the body or bark of the trees complained of. They may be imperceptible to the naked eye. Many in this vicinity did not notice that the trees were swarmed with the caterpillar until told of it.—*Rural Press.*

OLD RAILS FOR NAIL MANUFACTURE.—A manufacturer at Wheeling, West Virginia, is reported to be making a good quality of nails from old rails. Samples were some few days since shown at the office of the *Wheeling Intelligencer*, part of which were made out of rails, pure and simple, and part out of three parts coal and one part muck. They are pronounced good and are smooth and tough and drive well. The process of making them, we learn, avoids the process of boiling iron. The rails are cut and piled for the heating furnaces, like so much muck bar, and by the use of a flux in the heating process, are welded and made as malleable, ductile and close-textured in the sheet rolls as so much piled muck. Nail plate is thus made 85.25 per ton cheaper than out of pig iron which has first been made into muck bar. This saving, says the *Intelligencer*, is of itself a big profit, and will, if successful, revolutionize the old method. No mill can afford to puddle iron when by using this flux, old rail or pig iron can be converted directly into nail plate. The same paper says, also: "We lately mentioned that Colonel Powell is making nails at the Belleville mill out of the old rails and one-eighth muck iron, and that he claims to have an advantage equal to \$13 per ton for pig metal. If this turns out to be the case, the furnaces will not have much to do for some time to come, inasmuch as it is estimated that there are enough old rails in the country to run all the mills for several years."

These shell-mounds cannot rank in interest with the artificial elevations of earth of the mound-builders of the West, which, no doubt, were built for a purpose, and are not the refuse heaps of people whose only aim is to get along with as little exertion of mind or body as is consistent with the aphorism that they live to eat and eat to live.

ventor of any practical and effectual method" of preventing the further spread of the disease, and treating the plantations already attacked."

WHAT IS FEVER?—Dr. H. F. A. Goodridge, in a very interesting sketch in the *British Medical Journal*, of fever pathology, sums up our positive knowledge as follows: The characteristic elevation of temperature of the body in fever is mainly due to increased production of heat. Besides the increased production of heat there is a disorder of nutrition, and particularly of the muscular tissue, evidenced, on the one hand, by increased excretion of urea and potash salts, of carbonic acid, and perhaps also by water; and on the other by progressive loss of body weight. The increased production of heat occurring at a time when a principal source of normal heat production, viz.: the food ingested, is all but completely cut off, must have its origin in the abnormal disintegration of tissue. The converse may also hold good to a greater or less extent; there being thus an action and reaction. However probable may be the hypothesis of the intervention of the nervous system, the connection link between the entrance into the organism of the fever excitant, the pyrogenic matter (be this *contagium vivum*, or what it may be), and the onset of the characteristic phenomena, have not yet been demonstrated. In short, the proximate cause of fever remains undetermined.

REMOVING THE PRODUCTION OF TIN PLATE.—We read in the *Colliery Guardian* that the owners of upwards of 100 mills have been prevailed upon to reduce the make of boxes, the Association of Masters having agreed to close their works one week in every three weeks till the end of the present year, a document having been signed to that effect. A fine of £500 will be enforced against any parties who may violate the conditions of the agreement.

"I SAY, Paddy! that is the worst-looking horse you drive I ever saw. Why don't you fatten him up?" "Fat him up, is it? Fat! the poor baste can hardly carry the little mate that's on him now," replied Paddy.