

fine flavor of fresh butter is destroyed by the usual mode of washing, and recommends a thorough kneading for the removal of the buttermilk, and a subsequent pressing in a linen cloth.

9. At a meeting of the North Western Dairyman's Association, J. Boies, (who makes 300 pounds of butter per cow,) stated that he washes the butter till it is free from buttermilk.

10. At same meeting, Captain Tuttle denounced the practice of washing butter, as it takes away all the flavor: "people who cannot make butter without washing it had better leave it alone," he said.

11. A correspondent of the *Cincinnati Gazette*, says that washing butter drives out the milk more readily, saves labor in working with a ladle, and assists in retaining the aroma and grain of the butter.

12. F. D. Douglas, of Whitney, Vermont, one of the best of farmers, a high authority, and a practical dairyman, removes the buttermilk while the butter is still in the churn, and repeatedly adds water—ice water in warm weather—revolving butter and water together.

13. The *Horn Journal* thus discusses the question: "We approve of washing butter as it comes from the churn, that is, using so much water upon it while properly working it with the ladle or butter worker as will remove all traces of buttermilk. When buttermilk comes as it should, but very little water is required to take out the buttermilk. When the moisture that flows from the butter is clear as the water that is poured upon it or is not discolored as it passes off, the washing process is completed, and no more water should be used. Excessive washing injures butter, and of course some judgment in the matter is necessary. We are aware that many good butter makers are opposed to washing butter, holding that some of the more delicate flavoring oils are carried off by that process, and consequently that 'washed butter' has not that fine aroma which unwashed butter possesses. Possibly this may be in some instances, but as there is always danger of over-working butter and spoiling the grain in feeding it of buttermilk without the use of water, while at the same time there is danger of not expelling the buttermilk, we think it safer and better to wash it. A large majority of butter makers who make 'fancy butter,' wash the butter. Washed butter keeps better than that which is unwashed. This has been proved over and over again by the fancy product made under the two systems, both of which come into the London market. Butter in which there is a large proportion of casine retained, will not keep well for any considerable length of time, and a common sense view of the matter must show that washing most readily frees the butter of its casine.

14. L. B. Arnold, of New York, of large experience and good authority in dairy matters, says: "The idea that it washes out the aroma of the butter is more fanciful than real, and certainly much less injury is done to the texture by washing out the buttermilk than by working it out."

"When the butter is taken from the churn it is thoroughly washed in cool water before salting; however much washing butter may be condemned by others, it certainly works well at the creameries."

15. J. J. M., in *Journal of the Farm*, puts water with the butter in the churn to gather it, after drawing off the buttermilk, finds that it saves much labor in the subsequent working and doubts that it injures the butter.

16. At the Brooks Butter Factory, Little Valley Village, Cattaraugus county, New York, water is added to the butter in the churn twice, and the butter raised by rocking, before it is taken out and salted.

17. Col. George E. Waring, of Ogden Farm, who gets one dollar a pound for his butter, one of the first American authors and farmers, and a scientific and successful cattle breeder and dairyman, runs off the buttermilk from the churn, leaving the butter within and repeatedly adds water—sometimes three times—to the butter, raising and working when the churn with the paddles, this "consolidates the mass and removes most of the buttermilk;" in addition to this repeated washing in the churn, after the butter has been placed on a table for working, a large sponge, wrung out of cold water, is repeatedly applied to take up any buttermilk which may remain.

18. We see one butter maker washes his butter with sweet skimmed milk, because it is not injurious to the flavor of the butter.

Here is the testimony of seventeen witnesses, eleven of whom are in favor of washing the butter with cold water, to remove the buttermilk; and simply eleven to six does not show all the weight in favor of the plan: among the eleven are the best writers and dairymen in the country: Col. Waring, A. W. Cheever, J. Boies, F. D. Douglas, L. B. Arnold, E. C. Brooks, &c.

The six who do not approve of the plan are represented by only one name, Captain Tuttle, of the North Western Dairyman's Association, the other five are anonymous communications to the agricultural press.

We think this decides the question so far as a general principle is concerned, but not necessarily and unalterably for the practice of each individual: it is supposed that those who oppose the practice as injurious to the aroma of the butter have some good ground for their opinion, and of the course to be pursued each individual should be governed by individual experience, following that plan which they find giving the best results. Our own practice has been to work out the milk instead of washing it out: we have very cold water, (51°), feed bran and turnips, get the cream at proper temperature (62°), the butter comes hard and requires very little working. It is claimed in one section that washing butter—except in very warm weather—makes it rancid, hence the practice is not followed.—*Maryland Farmer*.

### Experiments in Setting Milk.

We quote the following from a correspondent of the *Buffalo Live Stock Journal*: "The cows experimented with were of the common stock, were stabled during the test and fed with dry hay and ten quarts of boiled oats each per day.

1.—November 3. Set 5½ lbs. of milk 7 inches deep, 40 hours: result in butter, 3 lbs. 9 oz. or 26 lbs. of milk to one of butter.

2.—November 4. Set 90 lbs. of milk 1½ inches deep, 36 hours, and had 5 lbs. 1 oz. butter, or 18 lbs. milk to one of butter.

3.—November 5. Set 87 lbs. of milk 1 inch deep, 36 hours: got 5 lbs. 13 oz. butter, or one pound of butter from 15 lbs. of milk.

4.—November 12. Set 92 pounds of milk ½ inch deep, 36 hours: had 5 lbs. 8 oz. butter: one pound of butter 17 lbs. of milk. The temperature of the milk soon ranged from 55° to 65° during the experiment."

1st. We wish to call attention to the above statement.

Was the milk in test 1 placed in cold pure water 7 inches deep?

The advocates of deep setting are advocates of deep water invariably. Was water used at all in this experiment?

2nd. "The cows were fed and stabled during the test" says the preamble. The 1st experiment, November 3—if the cows had previously been running out on scant and frosted grass exposed to the rigors of October in the inclement weather of the north, it could not be a fair test suddenly to stable and feed highly, and put the first mess of milk in deep cans as a test of the system.

3rd. The first test was November 3, and the result of that test is compared with the results of messes put in pans November 4th, 5th and 12th.

We have before us the result of some experiments of our own in which the percentage of cream varies in one day, in milk from the same cow three per cent.; in milk from another cow, the variation the same day was five per cent. of cream: how much greater the variation would be likely to prove after an interval of the one, two and nine days between the first and the remaining tests!

By further reference to our experiments and tests we find, to strengthen the above suggestions, that in the milk from the same cow on different days (June 1st and 2nd) there was a variation of five per cent. of cream, and in the milk of another cow the variation (June 1st and 2nd) was ten per cent. of cream; the variation in another cow, in milk drawn in one day, was seven per cent.

4th. The cows would be more likely to give an increased quantity of butter after their systems had been invigorated by the high feed and had grown accustomed to it (and had perhaps recovered from the unfavorable effects of a sudden change from bad to very good feed) even by the same system, mentioned in test 1, and we find that the product continued to improve at each successive test, (except the last) from 26 to 18 then to 15 pounds of milk for a pound of butter: we cannot attribute this favorable change to the different depths at which the milk was placed for reasons set forth in the third section of our remarks.

5th. We notice the range of the thermometer was from 55° to 65° during the experiments; were the forty hours mentioned in test 1 more unfavorable in consequence of heat or moisture or other atmospheric conditions to the rising of the cream, than the 36 hours mentioned in tests 2, 3 and 4?

6th. It will be seen according to the statement (test 3), that the best yield of butter was from milk set only one inch deep. We think the impracticability of setting milk an inch thick under proper

conditions, especially in large dairies, will prevent this test from having any bearing in practice. Whatever the facts upon which the above statement is based, we think the statement itself does not show that the results of the experiments evince the superiority of the shallow pan over the deep can system.—*Maryland Farmer*.

### Does Feeding Turnips affect the Taste of Milk and Butter?

The following replies to this question appeared in a recent issue of the *Country Gentleman*:-

I would say that feeding turnips to milch cows in small quantities, and at intervals, would not be apt to affect the milk. I have had considerable experience in the matter, and find this to be the fact. J. B. P.—Turnips will not hurt milk or butter in the least, if fed just after milking. I have fed half a bushel at a feed without causing any turnipy taste.

H. S. R.—In regard to turnips fed to milch cows affecting the taste of the milk and butter, I would say that if fed in sufficient quantity to do any good to the cows, it will affect the taste. M. C. S.—I have fed turnips in small and large quantities, and have never known it to affect the taste of the milk or butter. We have sold milk and butter to our customers, who would be very likely to say something if it were tainted. J. H. N.—I have fed two cows for the past month or more with turnips, twice a day, without having any taste of them either in milk or butter. My plan is to give them after the cows have been milked in the morning, and the same at night. D.—I feed at present 12 quarts per cow once each day, and that is fed immediately after milking in the morning. I have been in the practice of feeding turnips in this way for several years, without any bad taste in the milk or butter. I commence feeding lightly and increase up to one-half bushel if desired. I feed, in addition to the turnips at evening, 2 quarts of corn and oats ground into fine meal to each cow, and plenty of early cut timothy and clover hay. I am able to produce an article of butter that finds a market at several cents per pound above the common winter made butter. I find the orange mangold the best root to feed for butter-making, as it gives a very rich color to the butter, which I prefer to coloring with the juice of carrots. I think it a great loss to any farmer that keeps cows if he fails to have a good root crop. I winter our hogs well on Swede turnips. In fact, we have no stock upon the farm but what have their turnips; even young calves that are being raised soon learn to eat them, by slicing the turnips fine and putting a little meal upon them. F. Bowen.

LAST fall pigs should be fed very liberally at this season, in order that when they are turned out to grass or clover, they may be strong and vigorous. If they are fat now they will keep fat all summer on good clover.

PURIFYING MILK.—An *American Agriculturist* correspondent says that wood charcoal is an excellent absorbent of the disagreeable flavor of garlic in milk. He uses it every spring by dropping a piece three or four inches long and two inches thick into each pan of milk, or into the pitcher in which milk for table use may be kept.

STRAINING MILK.—This may seem a very simple subject, and one that most people think they can do well enough in their way, but I think there is a more excellent way than that practised by a great majority of our farmers. I find that most all of our milk raisers are content to simply let the milk run through a wire sieve or strainer attached to the pail. I don't care how neat a person tries to be during the operation of milking, there will be always be a little fine dust or particles which will go through the "strainer pail" perhaps almost unnoticed. But let it sit for a short time, then look at it through a magnifying glass or with the naked eye, and it would almost surprise one to see the dust and specks that will be visible. Now my method is to strain all the milk through a coarse cotton cloth or linen strainer (in addition to the one in the pail) fixed over the snout of the pail so as to let it run through both at the same time, and I find there is a great difference in the looks of the milk, and in the color, flavor and quality of the butter, when farmers strain their milk in this way instead of the other. Now, if you want purer milk and sweeter tasting butter, some that will sell higher in the market, just try the cloth strainer and see the difference, and especially where the cows are stabled.—*Cor. Mirror and Farmer*.