

THE DAIRY

THE CREAM SEPARATOR PAYS.

Information Interesting to Both Creamery Men and Milk Producers.

Will some of your contributors enlighten me on the subject of milk separators? How many rows ought one to have to make a separator profitable? Is the butter better than that made in the old fashioned way if proper care is taken?

We now have at our dairy school for the use of students studying farm dairying five kinds of hand separators, any one of which is a good machine and does its work satisfactorily. We have been using one separator a couple of years, running it part of the time with a Jersey bull on a two horse tread power. The bull soon grew to like the work, if we may judge from his actions. It was certainly a relief from standing idle all the time. He was especially delighted with the pail of warm skim milk which the dairyman gave him to drink at the close of the skimming. Our DeLaval Baby Separator No. 2 runs perfectly smooth and even with tread power. It runs easily by hand and it is not considered hard work to skim the milk of 10 or 15 cows.

First of all, get a pair of scales. One of the better class of spring balances costing \$1 will do. Weigh the milk of each cow as often as once a week, recording the same, so as to calculate the yield of a cow for a year. Next get a Babcock milk test. A four bottle machine is large enough and will cost about \$8. Use the test first of all to see how closely you are removing the fat from the milk by your present system. Analyze the full milk as it goes into the pans or cans and then the skim milk after the cream has been removed.

Mr. Morrison has been using the Babcock test in our farmers' institutes this winter, testing the full milk, skim milk and buttermilk brought in by farmers to the institutes. In a great many cases the skim milk showed 1 per cent fat left in the milk, while the full milk showed about 4 per cent fat—that is, these so called dairymen were losing 25 per cent of all the fat in their milk. These farmers had raised the feed, fed it to the cows, milked them and carried the milk to the house, where, because of improper handling, 25 per cent of the fat was lost. What business but farming can stand such waste?

As is said above, use the Babcock test and see how close you are removing the fat by your present system. If you are losing over two-tenths of 1 per cent fat in your skim milk by the present system and cannot improve upon it, you should begin at once to seek some other system of raising or separating cream. With the hand separators carefully run you need not lose over one or two-tenths of 1 per cent fat, the latter being the extreme limit.

Last year a farmer living near Fond du Lac, Wis., followed just the plan I have laid down and soon discovered that he was wasting a great deal of fat. He then took a hand separator on trial and in a month returned, saying he was ready to pay for it; that he was milking 18 cows and the hand separator was saving two pounds of butter a day over the old system; that these two pounds of butter saved were equal to having two more cows in his herd, and since he did not have to feed, milk or care for these two he was well satisfied to pay the price of the separator.

How can a farmer who is taking care of cows for money and not for fun afford to go along blindly, not knowing where he is losing the fat which has cost so much to make, when for \$8 and a little intelligent study he can learn just where the wastes are and be in position to check them?

If our inquirer will put the scales in his barn, get the Babcock test and then the hand separator if he finds it necessary, as he probably will, I will guarantee that he would not take \$100 at the end of one year and go back to his old practice of working in the dark, as he is now doing.—Professor Henry in Breeder's Gazette

An Example For American Girls.

A number of lady students who have gained certificates at the dairy schools in connection with the University college, Bangor, Wales, have been appointed instructresses in dairy work in various parts of the country. Among these are Miss K. M. Armstrong, who gained the advanced certificate last season and the first prize of \$25 in this examination, and has been appointed head instructress by the directors of the Anglesey and Carnarvonshire Dairy school; Miss M. E. Bibby, who holds the advanced certificate, has been appointed instructress in butter making under the Lincolnshire county council; Miss Gwyn Swift, who also holds the advanced certificate, has been appointed instructress in dairy work for the Berwickshire Agricultural association; Miss M. M. Christopherson is now the instructress in butter making for the Glasgow and West of Scotland Technical college, and is assisted by Miss Elizabeth Shirley, both of whom gained the advanced certificate in dairy work last season; Miss P. Conlthard has been appointed to act as instructress in butter making for the Wigtownshire county council; Miss Annie Matthews, who acted as instructress to Miss M. E. Roberts at Llewellyn Hall last season, has been appointed instructress in dairy work under the Essex county council; Miss M. A. Johnstone, who last year gained the advanced certificate in general dairy work, has again been appointed chief instructress in butter making at the Montgomeryshire dairy institute; Miss Catherine Hughes, who gained the ordinary certificate in butter making and cheese making, has been appointed to act as assistant at Llewellyn Hall, Denbigh—Public Ledger.

Beef is so high priced in Great Britain that the average agriculturist cannot afford to breed cows for dairy purposes alone.

HOW TO DRESS THE HAIR.

Ideas and Suggestions Suitable For All Faces and Styles.

Ladies of taste do not pile the hair in coils and puffs on the top of the head, but arrange it at the back in graceful, long shaped twists. This suits most faces admirably, as it softens hard features and emphasizes delicate ones, though it is whispered by those in authority that these modest coils are only the forerunners of large chignons, such as were displayed by the belles of 20 years ago. May the day never come when women will again allow their heads to be disfigured with these monstrosities, which absolutely ruin the natural growth of the hair.

One should always be careful to dress the hair in a style which will harmonize with the contour of the head and shape of the features, thus insuring an appearance which is never obtained unless the hair is carefully and becomingly arranged. Indeed this is a detail which marks a well dressed woman, and without which the most elaborate toilet looks dowdy and incomplete. The band called the fillet should serve to bind the hair against the head. Fillets were used when there were no hairpins, and they will be more graceful now if made part of the hairdressing instead of mere ornaments.

If you wish to secure the Greek effect, discard hairpins. Braid the hair loosely, starting a little above the nape of the neck, and pass your fillet about the head and over the braid, looping it up a little. The end of it hangs against the neck and comes undone as it chooses. If the start of the braid bulges and is not pretty, put another band around to hold it in place. The hair at the sides is pulled very loose, or the short locks are pulled from under the fillet and are drawn back loosely over it. Almost all the Greek ways are modifications of this method, and all depends upon the looping of the hair through the bands of the fillets, which should not be too tight.

How to Make Ice in the Country.

Into a gallon stone bottle pour seven pints of hot spring water. Into this put two ounces of refined niter. Seal the bottle with a rubber cork and let it down into a deep well. The water in the bottle will freeze solid in three or four hours. This time may be reduced by pulling the bottle up and down, so that it will not always be submerged.

How to Avoid Dyspepsia.

Many people have violent attacks of indigestion because they will persist in eating hearty meals when in an exhausted condition. They seem never able or willing to realize that there are times when the system is in no fit state to grapple with a full meal. They come in tired and hungry, almost ravenous, not thinking that maybe a good deal of what they call hunger is gastric irritation, then sit down to a table covered with the substantial of life and deliberately go to work to overtax the already strained vital powers. As a rule, paradoxical as it may seem, no person should eat when very hungry.

The wise thing to do is to drink a cup of hot water with three or four tablespoonfuls of milk in it, sit down for five minutes and then begin slowly to eat, and eat very sparingly. If this course were followed, there would not be one case of dyspepsia where now there are a dozen. It seems to be the most difficult of all things properly to control the appetite. People who are not habitually great eaters are guilty of serious indiscretion in the time and manner of taking food. The great mistake of the day is the lack of consideration of the laws and necessities of the human system.

How to Loosen Glass Stoppers.

Put a drop of sweet oil around the edge of the stopper. Then place the bottle near the fire until it becomes warm, when a light blow with a wooden instrument on each side of the stopper will generally loosen it. If, however, it should not repeat the oil and heat applications until successful.

How to Clean Straw Hats.

Put into something large some meal or grit. Place your hat on a flat, hard surface covered with paper. With the hand rub the entire hat with the dry meal. Use no water. Continue this dry grain bath until you feel satisfied that all the dirt which can be removed by that method is off. Next pour into a basin some lukewarm water, into which put some household ammonia. Use castle or toilet soap, and with a hard nailbrush scrub the hat, but be careful not to immerse it in the water. The drying must be done in the air, but not in the sun. This cannot be done to leg horn or common straw.

How to Heal Wounds on Trees.

Place a piece of muslin sufficient to cover the wound, and soaked in heated grafting wax, over the spot, and bind it on with strips of the muslin.

How the Word "Fudge" Originated.

This curious word has a positive personality underlying it. If Disraeli's account be authentic. In a very old pamphlet entitled "Remarks Upon the Navy" it is stated, "There was in our time one Captain Fudge, commander of a merchantman, who upon his return from a voyage, how ill fraught soever his ship was, always brought home his owners a good crop of lies, so much that now aboard ship the sailors, when they hear a great lie told, cry out, 'You fudge it.'" The ship was the Black Eagle, and the time was during the reign of Charles II of England.

How Nervous Headache May Be Relieved.

Many persons find speedy relief for nervous headaches by washing the head thoroughly in a weak solution of soda and water. Some cases are almost wholly cured in 10 minutes by this simple remedy. Others find it of the greatest benefit in the case of "rose cold," the cold leaving the eyes after the first washing of the hair. All drafts of air should be avoided till the head is thoroughly dried.

How to Make Modeling Clay.

Finely dry clay with glycerin instead of water.

TILLAMOOK'S RESOURCES.

A Description of the County.—Its Many Advantages.

About fifty miles south of the mouth of the Columbia river is the entrance to Tillamook bay, and here is the center of a county rich in resources, and magnificent in its possibilities. Tillamook county extends for about ninety miles north and south along the coast, and inland to the Coast Range, an average distance of twenty miles.

The county has an area of 2000 square miles, and is larger than some of the smallest states, and capable of supporting as great a population as some of them.

Tillamook is in about the same latitude as St. Paul, Minnesota, though the climate here is much warmer and more even. The Japan current warms the shores of this region in such a way that winter is hardly noticed here. There is little or no snow generally, and when it does fall it soon melts away. The principal feature of winter is the long continued rains, always warm and this season of the year is remarkably healthful. The summers are unsurpassed. No finer climatic conditions exist than those of a Tillamook summer. This is the dry season, generally speaking, but there are refreshing showers occasionally, and the sea breeze tempered by the Japan current, is perfectly delightful. People camp out doors six to eight months in the year here with perfect comfort.

THE TIMBER.

The immense forests of this county are its chief and greatest resource. It is impossible to convey an idea of the magnitude of this item by any description. It is necessary to travel through our dense forests in order to even comprehend the least idea of their extent and immensity. A great portion of the county is covered with a growth of trees, the like of which can not be seen in any other portion of the United States. There may be a few larger trees in the redwood forest of California, but the fir trees of this section will almost equal them in size and they stand so thick that they are much taller; and much more imposing in appearance. A man can not enter into the gloomy shades of our dense woods without feeling a sense of awe, if not reverence, towards the giant monsters of the forest. Trees ten and twelve feet in diameter are often found, and the average size of the firs is perhaps six feet in diameter. And many of these trees are 250 and 300 feet in height. The trunks are very straight, and taper so slowly that it is hardly noticeable, and many of them have no vestige of a limb for the first hundred feet above the ground. Near Skookum lake, in this county, is a tree that is twenty-eight feet in diameter near the ground, thus almost equalling in size the famous "Big Trees of California." Once see the big trees in Tillamook county and you will lose all desire to see the California monsters. Here, it is possible to travel for miles and miles through dense forests of big trees, any and all of them being wonders in size to people who are accustomed to the tooth pick timber of Minnesota or Michigan. The largest specimens of timber in the eastern or central states, are more telegraph poles in comparison with the stately fir of Oregon. In places where settlers have tried to clear out a garden spot on their homes, it is a common thing to see a large tree that has been felled, used for a fence on one side of a lot. Near this city, on the public road is a log serving as a fence in this way that is twelve feet high as it lies, being higher than the top boughs which pass by. In fact a man would have to be on top of a load of hay to look over this particular field. These stories regarding the immense size of the timber here are hard for people to believe who have not seen it, and those who have read the fullest descriptions of them are surprised to find them so large.

There are several kinds of timber here. The fir is most abundant and is in the rough and mountainous regions. The tide land spruce is plentiful along the coast and on the rivers and the spruce attains a large size as the fir. Cedar is found in many localities also, and larch grows on the summit of the coast range. These are all valuable timbers. The fir (properly Douglas spruce) is a very durable and strong wood, and is manufactured into rough lumber for all purposes, and is made into flooring and rustic weather boarding largely. A great deal of fir is used for ship masts. Timbers, 150 feet long have been saved from it in many instances. Spruce is a softer wood, is white and is used mostly for finishing lumber and for boxes and barrels. Being odorless, it is good for packing butter and fruits. The largest area of spruce in the Northwest is found in Tillamook county, and as it is growing scarce elsewhere, it will be of great value in a short time. Most of the lumber manufactured here now is made from spruce. The cedar takes an elegant finish, and is the very best material for doors, sash and shingles. It commands a high price at present.

Nearly all of the timber in this county is adjacent to streams that will float logs, and with a little labor all of it can be put in streams where the winter freshets will bring it to the bay. The expense of logging here will always be small. The county is a net work of rivers that choppen the coast of logging right at the start. Many of these rivers are good sized streams on their lower courses, but the Coast Range prevents their being very long, and dozens of creeks course down the innumerable canyons of the range, uniting into one large stream. No less than five rivers empty into Tillamook bay. The lower courses of these streams are affected by the tide and so far as the tide water extends inland, steamboat navigation is carried on. This makes the navigable extent of Tillamook bay and its arms very great, and the facilities for rafting logs are much better than in most countries. There is in Hobsonville, on Tillamook bay, a mill that cuts 30,000 feet of spruce lumber per day for the San Francisco market. Two vessels are employed in carrying the lumber there and it is all made into boxes, mostly for raisins and fruit. At Bay City is a small mill that cuts about 20,000 feet of lumber per day, the product of which is mostly consumed at home. The Cooperage works at Bay City are capable of working a great amount of spruce into barrel staves, and a large new mill is partially built. At Tillamook City there is a saw mill that runs steadily, cutting about 20,000 feet of lumber per day, mostly for local use. This mill has a planing attachment. At Woods, on the Neskaneum river, in the south end of the county is a saw and planing mill that supplies the local demand and there is another local mill on the headwaters of the Big Neskaneum. On Neskaneum there is a mill that supplies the local wants, also a large mill and box factory, which is capable of working 40,000 feet of lumber per day into boxes.

Other large milling industries, some of them much larger than any mentioned, will be started soon. A logging railway has been surveyed into one of the finest bodies of timber in the county, right of way secured and ample grounds for yards, piers and mill sites have been procured. It will not be long until active operations on a large scale will begin, and the improvement of the bay and bar of Tillamook and Neskaneum, both of which are being provided for by the government, will give a great impetus to the lumbering business of this county. A low estimate puts the amount of lumber in our forests at 200,000,000 feet, and the work of cutting this into lumber, with all the preliminary work of logging, will give a large population employment for many years to come. A great deal of money will be distributed here, and the farming community can find a ready

market for all their produce right at home. Some good sized towns are sure to spring up on Tillamook bay and on Nehalem river as soon as the lumbering business gets well started.

The lumbering interests are by far the most important resource of the county, and this resource cannot possibly be exhausted within the next hundred years. The improvement of the harbors and the opening of the Nicaragua canal will bring all the lumber produced on this coast within reach of the Atlantic coast market, and there will also at that time be a greater demand for lumber on this coast as a general degree of prosperity will begin on this coast as soon as there is a canal across the isthmus and the high trans-continental rates broken.

DAIRYING.

Next in importance to Tillamook's lumbering resources, are the dairy interests. Grass is good here the year 'round. Feed is plentiful and easily produced, the climate is so temperate that cattle thrive; and all the conditions here contribute towards making dairying successful. The grasses and natural feed are of a kind that produces the best milk and butter. The climate is so even and cool, and the water so pure that the butter here possesses the finest flavor if any care is taken in making it. This business is found very profitable here and nearly two hundred tons of butter have been shipped from here during the past year. General stock raising goes with dairying here generally, and is very profitable.

FARMING.

General farming pays well here, especially when done in connection with stock raising. Markets are getting better every year, and as soon as the wagon roads are put in better shape, which is being done rapidly, the farmer will not have any trouble in finding a good market for his produce all the year. Of course there is no railroad yet, but the freight by the steamers is low, besides there is a home market at present for a great deal of produce. Barley and oats grow here to perfection, making yields equal to the richest sections of California or Oregon. Hay of various kinds does as well here as in any part of the United States. Potatoes and garden vegetables of all kinds are at their best here, and the yield is simply enormous. Hops grow and mature well wherever tried. There is a large area of prairie and bottom land in this county, and it is capable of supplying a large population. The hill lands are good for fruit and for grazing, and there is plenty of this kind of land, with occasional patches of table land or bottom land, that can be obtained under the government land laws. Land much less productive than this in the eastern states is being farmed. In fact there is very little of this county but what can be made productive in some way. The tide lands here are exceedingly rich, and much more of it could easily be reclaimed from the tidal overflow and made to yield immense crops. A great deal of the tide land is covered with a thick growth of nutritive grasses, and it is the most remunerative land that the county has. Cattle are often allowed to roam in the hills, and even in the woods, all winter without other feed than the natural grasses, and come out in good condition in the spring. The hills that have been denuded of their timber by fire make good sheep ranges. Fruits of all kinds grow to perfection here, especially apples, pears, prunes and small fruits, such as blackberries, strawberries, raspberries, etc. are prolific bearers. The woods are full of wild berries, there being almost a dozen distinct varieties of huckleberries, besides salmonberries, thimbleberries, and many other kinds, which goes to show that this is a natural fruit country. Bee-keeping is carried on in some localities, and the honey produced here always commands a high price being of exceptionally fine flavor. A living can be made here on a very small farm, and farmers can always do well here. There are the class that is needed. Improved land here sells at \$20 to \$40 per acre and unimproved land is worth from \$5 to \$10 per acre. A farm of 160 acres can be obtained from the government by residing on it five years, or by residing on it fourteen months and paying the government \$1.25 per acre. There is yet much vacant timber land which can be had on the same terms as above, or may be bought outright from the government without residing thereon for \$1.50 per acre. This land is selling to timber speculators at prices varying from \$800 to \$1600 per quarter section of 160 acres and will soon be worth a great deal more.

ETC. ETC.

Salmon fishing is carried on during the fishing season on Tillamook bay, on Nehalem bay, and sometimes on Neskaneum bay. The output of canned salmon amounts in value to \$50,000 to \$100,000 every year, and gives employment to a great many fishermen. There are canneries at each of the above named places and the item of canned salmon amounts each year to much more than the wheat of some of the grain producing countries.

Coal is found in abundance on the Nehalem and of good quality. These deposits will be worked soon. Coal is also found in other localities, and other minerals are known to exist in various parts of the county.

There is no better field for the sportsman than Tillamook. The hunter can find elk, deer, waterfowl, bear and cougars here; the fisherman can yank thousands of fine speckled trout from the mountain streams. Trolling for salmon in the bay is an exhilarating sport. The salmon is a gamey fish, and sometimes it takes half an hour to bring in one of these lively fishes, and some of them weigh as much as fifty pounds. There is no finer fish than the Royal Chinook Salmon. For those who like to talk, the world easily there is a fine fish which can be caught more readily. We refer to the succulent clam, which grows in the sand bars and mud flats every where on the bay or beach. A common farming utensil, a hoe or shovel, is all that is needed, or you can dig them out with your hand. They are delicious in various ways, and there are several varieties of clams, oysters and mussels. Crabs are plentiful also. In the bay, flounder, sturgeon, porgy, and other fish are found. Deep sea fish are plentiful.

Nehalem beach, Netarts beach and Neskaneum beach are favorite resorts for campers, and they are frequented by wagon loads of campers every year who amuse themselves by digging clams, gathering shells and bathing. There will soon be better roads to these places, and they are sure to become popular resorts.

The same general description is practically good for every locality in the county, and as lack of space will not permit a special review of each valley or particular neighborhood, we mention a few of the special features only of each locality. Nehalem is particularly noted for its vast resources of timber and for its coal. There is, also, much fine bottom land on the Nehalem, and at the mouth of the river will be an excellent harbor when the proposed government work is done. The Nehalem river is a very fine stream, and for scenic grandeur is not surpassed even by the majestic Columbia. The river is more than one hundred miles long and thousands of sections of magnificent timber are tributary to it and its branches. The greatest area of farming land is around Tillamook bay, and on the various streams tributary to Tillamook bay. These streams will be the means of bringing large bodies of timber to the saw mills on the bay. Netarts is famous as a summer resort, and some fine bodies of spruce timber are adjacent. Neskaneum is a farming and stock raising country, the timber having been burnt away years ago. The people in that section are prospering. South of Neskaneum is the Neskaneum Reservation, covering one-third of the county, and containing much fine agricultural land. The Indians are disappearing fast, and the Indians having land allotted to them in severalty, after which the reservation will be opened for settlement.

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