CIHM Microfiche Series (Monographs)

ICMH Collection de microfiches (monographies)



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques



Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best origir.ai copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming are checked below. L'Institut a microfilmé ie meilieur exemplaire qu'il iui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

	Coioured covers /		Coioured pages / Pages de couieur
	Couverture de couieur		
	Covers democrad /		Pages damaged / Pages endommagées
	Covers damaged /		
	Couverture endommagée		Pages restored and/or laminated /
			Pages restaurées et/ou peiliculées
	Covers restored and/or laminated /		
	Couverture restaurée et/ou pelliculée	<u> </u>	Pages discoloured stained or fored /
			Pages déssistées, tachatées au siguées
		لنقا	Pages decolorees, tachetees ou piquees
	Cover title missing / Le titre de couverture manque		
			Pages detached / Pages détachées
1 1	Coloured maps / Cartes géographiques en couleur		•
	server makes serves geographingses en eester		Chauthrough / Transmortenes
_	Ontervendints (in a state of the state of the state of the		Showthough / Transparence
	Coloured Ink (i.e. other than blue or black) /		
	Encre de couleur (i.e. autre que bleue ou noire)		Quality of print varies /
			Qualité inégale de l'impression
	Coloured plates and/or illustrations /		
	Planches of/ou illustrations on coulour		
	Planches evou mustrations en couleur		includes supplementary material /
_			Comprend du matériel supplémentaire
	Bound with other material /		
	Relié avec d'autres documents		Pages wholly or partially obscured by errate slips
			ticques etc. house been refilmed to ensure the best
	Only adition available /		issues, etc., have been reinned to ensure the best
			possible image / Les pages totalement ou
ل ــــا	Seule édition disponible		partiellement obscurcies par un feuiliet d'errata, une
			peiure, etc., ont été filmées à nouveau de facon à
	Tight binding may cause shadows or distortion along		obtenir la meilleure image nossible
	interior margin / La reliure serrée pout couser de		obterni la menedio image possible.
	lambas au da la dista di serie peut causer de		
	i ombre ou de la distorsion le long de la marge		Opposing pages with varying colouration or
	intérieure.		discolourations are filmed twice to ensure the best
			possible image / Les pages s'opposant avant des
	Blank leaves added during restorations may appear		colorations variables ou des décolorations sont
	within the text. Whenever possible, these have been		filmées deux fais effe distants la mailleur insert
	within the text. Whenever possible, these have been		nimees deux fois afin d'obtenir la meilleure image
	omitted from filming / II se peut que certaines pages		possible.
	blanches ajoutées lors d'une restauration		
	apparaissent dans le texte, mais, lorsque cela était		
	possible ces pages n'ont pas été filmées		
	poor bio, ood pages it ont pas ete minees.		
	Additional comments /		

This item is flimed at the reduction ratio checked below / Ce document est filmé au taux de réduction indiqué ci-dessous.

Commentaires supplémentaires:



The copy filmed here has been reproduced thenks to the generosity of:

National Library of Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Originai copies in printed paper covers are filmed beginning with the front cover and anding on the last page with a printed or illustrated impression, or the back cover when appropriate. Ali other original copies are filmed beginning on the first page with a printed or illustrated impression, and anding on the last page with a printed or illustrated impression.

The lest recorded freme on each microfiche shell contain the symbol \longrightarrow (meening "CON-TINUED"), or the symbol ∇ (meening "END"), whichever epplies.

Meps, pietes, cherts, etc., mey be filmed et different reduction retios. Those too large to be entirely included in one exposure ere filmed beginning in the upper left hend corner, left to right end top to bottom, es meny fremes es required. The following diegrems illustrete the method: L'exempleire filmé fut reproduit grâce à la génerosité de:

Bibliothèque nationale du Canada

Les images sulvantes ont été reproduites avec le plus grand soin, compte tanu de le condition at de le netteté de l'exempleire filmé, et en conformité evec les conditions du contrat de filmage.

Les exempleires originaux dont le couverture sn pepier est imprimée sont filmés en commençent par le premier plet et en terminent soit par le dernière pege qui comporte une empreinte d'Impression ou d'Illustretion, soit par le second piet, seion ie cas. Tous les sutres exempleires origineux sont filmés en commençent per le première pege qui comporte une empreinte d'Impression ou d'Illustretion et en terminant par ie dernière pege qui comporte une teile empreinte.

Un des symboles suivents appereitre sur le dernière image de chaque microfiche, selon le cas: le symbole → signifie "A SUIVRE", le symbole ♥ signifie "FIN".

Les certes, pienches, tableeux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grend pour être reproduit en un seul cliché, il est filmé à pertir de l'engle supérieur geuche, de geuche à droits. et de heut en bes, en prenent le nombre d'imeges nécesseire. Les diegremmes suivents illustrent ie méthode.





1	2	3
4	5	6

MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)





.

1653 East Main Street Rochester, New York 14609 USA (716) 482 – 0300 – Phone (716) 288 – 5989 – Fax





DEPARTMENT OF AGRICUL. URE DAIRY AND COLD STORAGE BRANCH OTTAWA - - CANADA

THE ISLAND OF ORLEANS CHEESE

BY

J. C. CHAPAIS Assistant Dairy Commissioner

BULLETIN No. 37 DAIRY AND COLD STORAGE SERIES

OTTAWA GOVERNMENT PRINTING BUREAU 1913

40000-1



LETTER OF TRANSMITTAL.

ОТТАWA, March 15, 1913.

the Honourable

The Minister of Agriculture.

Sig,—I beg to submit a manuscript copy of a description of the cheese which has made for many years by certain families living on the Island of Orleans, together in some notes on the process of its manufacture, which has been prepared by Mr. J.C. pais, Assistant Dairy Commissioner.

This description of the Island of Orleans cheese was first prepared by Mr. Chapais an article in the *Journal of Agriculture and Horticulture*, edited by the Quebec bartment of Agriculturc. It was afterwards published in pamphlet form. The most copy has been somewhat revised.

I have the honour to recommend that it be printed for general distribution as falletin No. 37 of the Dairy and Cold Storage Series.

1 have the honour to be, Sir.

Your obedieut servant,

J. A. RUDDICK, Dairy and Cold Storage Commissioner.





FIGURE 2--PAN WITH MOULDS.





FIGURE 2-RUSH MAT.



THE ISLAND OF ORLEANS CHEESE.

By J. C. Chapais.

In the grocery stores of the old eity of Quebec there is offered for sale a small soft cheese, very ripe, of a strong characteristic flavour and which is considered a great delicacy by connoisseurs. This cheese, better known in French as "Le fromage rafiné de l'Isle d'Orléans" (the word 'raffiné' being a corruption of the word 'affiné', meaning cured or ripened) is a home made product, being manufactured exclusively on the farms of the Island of Orleans, a few miles below the eity of Quebec, in the river St. Lawrence, where it is a fairly profitable industry. In view of the many requests for information that have come to me from various persons, I have thought that a description of the manufacturing process of this dainty little cheese might be of sufficient interest to warrant publication.

The information contained in this bulletin was gathered, in the course of a recent official tour, from one of the best families of cheesemakers on the Island, that of Mr. Joseph P. Roberge, of the parish of St. Pierre, who very kindly supplied me with all the facts necessary to enable me to write the following notes.

HISTORICAL.

My first endeavour was to ascertain the origin of this cheese. I found, in the first place, that it has been manufactured for sale from time immemorial in the Island of Orleans. Kalm, a Swedish naturalist, who visited New France in 1749, mentions this cheese in a relation of his journey. I also ascertained that it is made almost exclusively in the parish of St. Pierre and only in ten families, in which the process of manufacture was handed down from father to son, or it would perhaps be more proper to say, from mother to daughter. At the present time, the heads of these families are: Joseph and Louis Aubin, F. X. Côté, Jean Ferland, Joseph Gagnon, Jean Goulet, Pierre Plante, Joseph J. and Joseph P. Roberge and Nareisse Rousseau.

Madame Jos. P. Roberge belongs to the Gosselins, one of the families who were the first to make this cheese at St. Pierre. Of course, it is also manufactured by a few other families in various parishes of the Island, but, strictly speaking, all the Island of Orleans cheese which is marketed is made at St. Pierre.

As this cheese is not unlike many varieties of soft cheese made in France. I believe that it is of French origin and I have endeavoured to support this view with facts. In the first place, I find that all the families above mentioned have belonged to the parish of St. Pierre from the earliest times of the French colony. In the records of the parish, which go as far back as 1679, the name 'Aubin' is mentioned for the first time in 1693, that of 'Côté' in 1684, 'Ferland" in 1680, 'Gosselin' in 1683 and 'Rousseau' in 1680. The name 'Goulet' appears a little later, in 1700, 'Plante' in 1747 and 'Roberge' in 1709. The Gagnon family eame rather later from Château-Richer, after 1750. As already stated, the Island of Orleans cheese was made in these families at a very early date, beyond the knowledge of the present generation. It remains to show that these families made cheese in France before they emigrated to Canada. I believe that they did, for two reasons: There are, in France, two districts. or 'départements' where, besides a number of varieties of soft cheese, manufactured in co-operative factories, such as Brie, Camembert, Pont-l'Evêque, Mont-Doré, Portdu-Salut, etc., there is also found a home made cheese which is made much in the same manner as the product of the Island of Orleans. These are the 'départements' of Aube and Yonne, which form part of the old province of Champagne. This home made

б

×.

cheese is the 'Soumaintrain', better known in the trade under the name of Saint-Florentin and which is produced in the Armance Valley. Two characteristic features of the manufacture of the 'Soumaintrain' are that the milk is set (renneted) as soon as it is drawn from the cow and the cheese is cured or ripened in a wooden box. Now, these two features are also characteristic of the making of the Island of Orleans cheese. Another proof that this cheese was made in France by the same farmers who afterwards emigrated and settled in Canada is the fact that the word 'ficèle' or 'fissèle' is used on the Island of Orleans to designate the mould in which the curd is put, at the beginning of the manufacturing process. I find the same word, although spet differently, in the 'Maison Rustique du XIXe Siècle' and in the sixth edition of Pouriau's 'La Laiterie'. In the first place, it is spelt 'fescelle' and 'faisselle' in the second. Evidently it is the same word brought to this country by the French settler, who had made the same cheese in France and the pronunciation of which was altered on the Island. However, in Canada, as well as in France, it is applied to a drainingmould, formerly made of wood, but now made of tin, used in the manufacture of cheese

PROCESS OF MANUFACTURE.

The Island of Orleans cheese is made of whole milk. The quantities given in the following description of the method of making, are for three gallons of milk, which give nine small cheese, weighing a little more than five ounces each, or three to the pound when ready to be marketed.

Setting the milk.—The milk is set as soon as it is drawn from the cow and whik it is still at the milking temperature, about 90° Fahr. The extract of rennet used for coagulating is made by the people of the Island in the following manner: The fouristomach of a calf is taken. The calf must not be more than seven weeks old and for exclusively on milk. The stomach is cleaned out, washed in cold water, spread on board, rubbed on both sides with a mixture of two spoonfuls of coarse salt and out teaspoonful of pepper, then put away to dry. When ready to use, it is cut in pieces small enough to pass through the neek of a bottle; then a pint of water, a half-cup of sugar cane syrup (good molasses), a dessert spoonful of coarse salt, and a pinch of pepper are mixed and boiled for ten minutes. The mixture is then taken off the store and while it is still luke-warm, it is poured into the jar which contains the pieces of rennet, the jar is tightly corked and the resulting solution—or extract of rennet—is ready for use after twenty-four hours. About a spoonful of this extract is required for three gallons of milk. The milk coagulates in half an hour or so.

For setting, a tin pail is used, same as that employed for milking cows, holding about three gallons and a half.

Cutting the curd and removing the whey.—When the milk is completely coaguated, the curd is cut into two-inch cubes with an ordinary knife and as the whey separates from the curd, it is poured out of the pail. About two hours are required for drawing off the whey in this fashion.

Draining the curd and moulding.—When all the whey is run off, the eurd is laded into a perforated tin vessel or mould. (See Fig. 1, Plate I.) This mould, already mentioned, is called 'fissèle' on the Island (from the old French word 'faisselle') It is of round, or rather cylindrical shape, made of tin, and the bottom and sides are perforated like a sieve up to one inch from the top. The holes, which are about one sixteenth of an inch in diameter are placed half an inch apart. The mould is raised on three small legs, one inch high, which are simply round tin cylinders, soldered at the bottom to allow the remaining whey to escape from the bottom and sides.

As many of these moulds are required as the number of cheese that are to be made out of one batch. They are filled with curd, not packed, and a handful of coarse salt for every three cheese is thrown on top of the curd. of Saintc features) as soon ox. Now, ns cheese. who afterr 'fissèle' is put, at ugh speh dition of e ' in the a settlers, is altered drainingof cheese.

en in the hieh give ae pound,

id whils insed for and folead on i and on and on in pieces f-cup of pinch of he store pieces of intet—is ired for

holding

coagulc whey equired

s ladled already selle'.) des are ut oneised on at the

e made se salt Treatment of the curd in the mould.—The moulds containing the curd are placed a a tin pan. This pan is usually 28 inches long, 14 inches wide, with rims 3 inches igh. It will hold a dozen moulds.

The pan, with the moulds on top (See Fig. 2, Plate I) is placed on a table, near a toye, where it is held at a temperature of 70° Fahr. It is raised at one end and the hey draining off the mould escapes through an outlet at the lower end. A pail is laced under the outlet to receive the whey, which is used again for washing the cheese, swill be seen later. When the top of the eurd appears to be well drained, the curd is ten out of the mould, turned over and replaced in the mould, the side that was on p being this time at the bottom. A little salt is again thrown on the top. The curd is left in the mould until it has sunk to about half of its original height, then it is aken out for the last time.

Placing the cheese on the mat and rack.—When the cheese are taken out of the nould for the last time, they are placed on a rack, four feet three inches long and two feet three inches wide. This rack consists of two sticks, one inch thick, on the top of thich are nailed laths one inch wide and half an inch thick, placed one inch apart. There are about 20 to 25 laths in a rack. (See Fig. 1, Plate II.)

Before placing the cheese on the rack, however, the latter is covered with a small at, made of rush, which is called a 'paillasson' on the Island. The rush used in the mking of this mat is the ordinary 'Bull Rush' (Juncus effusus), a species chiefly bund in ditches and swampy grounds and which grows in large tufts. This mat, which s two feet three inches wide, requires about 150 rushes. These are placed on a table and firmly threaded together by means of a strong needle and a coarse, home made far thread. As many lengths of thread are used as are required to give the mat ufficient resistance. The rushes are arranged with the heads, or small ends, at one extremity and the tails, or big ends, at the other extremity, so that they are as evenly spaced as possible. Otherwise, the surface of the mat would be uneven, and the cheese, which are very soft when placed on the rack, would not keep their shape. (See Fig. 2, Plate II.) The cheese are placed side by side but not touching each other on the rack, which has previously been covered with the mat. The rack is then placed matin pan of the same size, having a rim two inches high around the edge and a tap at one end through which escapes the liquid which drains off the cheese whilst the latter arc on the rack. (See Fig. 1, Plate III.)

The pan, with the rack, mat and cheese on top, is hung up one foot from the eeiling, in a room kept at a temperature of about 70° Fahr., generally the kitchen. It is never hung above the stove, as an excess of heat would melt the fat off the cheese. It cheese are turned over twice a day. Two days after being put on the rack, they are washed in a light brine, made by adding two handfuls of coarse salt to a gallon of whey, drawn off from the fresh curd, cut the same day or the day before. For this washing a clean cloth is used. After they are washed, the cheese are placed side by side on a home spun flax line cloth, about five feet long by three feet wide, laid on a table and they are covered wit another cloth. They are left there for two hours until the excess of moisture resulting from the washing has been absorbed by the cloth, then they are put again on the rack, the old mat having first been replaced by a new one. At first, the cheese are washed every other day, then every third or fourth day, as they are getting firmer, so that they may be ready for the ripening process, fifteen days later.

When it is desired, at this stage, to keep a certain number of cheese for some time before ripening them, they are put in a cool, dry place, not heated, but where it does not freeze. Under these conditions, they keep a fairly long time without spoiling.

The ripening process.—Immediately before ripening, the cheese are prepared in the following manner. They are put in a vessel, large enough to hold them all conveniently; the vessel is filled with cold water until the cheese are covered and two handfuls of coarse salt are thrown in the water. The cheese that come directly off the rack are left twenty-four hours in the water; those that have been kept for some tim after being taken off the rack are left from thirty-six to forty-eight hours.

After this immersion in cold water, each cheese is wrapped in a square piece linen cloth, nine inches square, of the same make as the cloths already mentions. The face of the cheese, that is, the surface that is to be on top during the ripenin is laid on the cloth, and the four corners are brought around the under surface. The pieces of cloth are first dipped in a luke warm brine and simply wrung. The cheese which are then one inch thick, are placed in a box three and a half feet long, eighter inches wide and fourteen inches deep. The length and width of the box may rewith the number of cheese that are to be ripened, but the depth remains always same. There are in the bottom of the box from six to eight holes, half an inchdiameter and at equal distances apart. A box of this size easily holds three row cheese in width by seven rows in length, each row being twelve chees 'aigh, or hundred and fifty-two cheese. When the box is filled, it is covered with a cloth of same quality as those already mentioned, and which has also been soaked in brine it is placed in a cellar where it is kept at a temperature of about 45° Fahr.

Care of the cheese during ripening.—When the cloths in which the cheese wrapped begin to dry, they are moistened with a light, luke warm brine. This point is repeated every other day. When they begin to turn yellow, they are washed in water and afterwards rinsed in water to which a little salt has been added. At washing, of course, the cloths are taken off the cheese and put on again after washing. This goes on for three weeks. At this stage, the body of the cheese yields un finger pressure.

Moulds.—Great care must be taken to avoid the growth of moulds on the ch-A continual watch must be kept. Should the cellar be too warm or too damp, mai (penicillium) may develop. Should this happen, the cloth must be taken off the chand washed, as the mould greatly injures the body of the cheese.

How the checse are prepared for the market.—Twenty-four hours after the washing of the cloths, that is after twenty-one days of ripening, the cheese are wrapfor the last time. All yellow parts of the surface are scraped until the cheese is feetly white. Then the cheese are wrapped, one by one, in ordinary cheese cloth of paraffined paper. Each cheese is then five inches in diameter, one inch thick weighs on an average five ounces and one third, which gives three cheese to the point

Time required to make and ripen the cheese.—The time required for the variant stages of the making is as follows :--

Remeting and coagulating	1 ho 2 ho	ur.
Draining curd in moulds	10	12
Length of time on racks	15 da	ys.
mpenng	21 "	

Total time, 36 days, 121 hours.

GENERAL NOTES.

People who are familiar with the manufacture of the ordinary soft cheese, such Brie and Camembert will readily perceive the essential points of difference betwee their method and the method of making our 'Island of Orleans Cheese'. At the local ning of this article, I stated that the manufacturing process of the Soumaintrain's St. Florentin cheese resembled, in several features, that of the Island of Orleans cheese some tin

The piece mentio a ripeni rface. The ch g. eigh may ve always an inch tee rows gh, or loth of brine

cheese his p od in a At r washir olds un

the chan np, mak the chan

e wrap, ese is loth or thick he pound

e vario

betwo betwo he beca itrain was s cheese



FIGURE 4 PAN FOR HOLDING RACK AND MAT.



FIGULE 2 -PAN WITH RACK AND MAT IN PLACE.

PLATE 111.





di.

FIGURE 2--MADAME JOSEPH P. ROBERGE.



"The main fact in connection with the Somnaintrain is that all operations are performed in an alkaline medium. This is the essential point of difference between the Soumaintrain and all other soft and ripened choese like the Brie. The object of setting the milk immediately after milking is to avoid any development of acidity.

Owing to this rapid congulation of the milk, all the fat goes into the cheese and the latter has a higher nutritive value and more flavour. It melts in the mouth. The fats, as is well known, retain the odours.

During the ripening of the cheese, there is a breaking down of the casein and a fermentation of the lactose, resulting in a soft, mellow bodied these, more digestible, more appetizing and of better flavour. This is the chief object of ripening.

This transformation of the cheese is caused by the diastase of casease and by microbes of the Tyrothrix type. These agents of fermentation give off gaseous products, particularly ammonia. They develop in the absence of oxygen. This is why the ripening of Soumaintrain is done in boxes. The ammoniacal atmosphere obtained in this way has the further advantage of helping in rendering the casein soluble."

Character of the Island of Orleans Cheese.—A good Island of Orleans cheese never hows any moulds. The colour is creamy white on the outside, of a deeper shade is cream inside; the body is meaty, soft, mellow. A well ripened cheese, ready for asumption does not liquefy, but melts readily in the mouth. It gives off a strong menniaeal odour, disagreeable to most people. As already stated, the cheese is five aches in diameter and one inch thick. (See Fig. 1, Plate IV.)

They are made from the middle of September to the middle of March only.

Analysis.—An analysis of the cheese was made at my request by Mr. A. I fourchot, Chemist, Chief of the Official Chemical Laboratory of the Province of hebec, at the St. Hyacinthe Dairy School. I am greatly indebted to Mr. Tourchot whis kindness in regard to this matter and beg to offer him my sincere thanks.

Water	
	53.82%
Total solids	46.18%
Composition of total solids.	10 10 /0
Fat	OF SEN
Solida mat fat	20.00%
bolids not lat.	20.83%
Composition of solids not fat.	10
Casein or albumin and salts soluble in hot water.	5.090
Casein and salts insoluble in has mater	0.0270
E-	15.81%
r ree ammonia and ammoniacul salts expressed as ammonia.	0.701%
10tal nitrogen	2.770%
Chloride of sodium (kitchen salt) in the solids not fat,	- 10
soluble in hot water	1.71%

PROFIT IN MANUFACTURE.

We now have to see what profit the industry leaves to the farmers of St. Pierre. We will have to take into account the value of milk in the Island during the manuacturing season, the cost of material and accessories for making the cheese; the help equired and the selling price of the cheese. All the figures here given were supplied or the farmers themselves. On the Island of Orleans, the milk is worth only 12 cents a gallon; it is we 25 cents a gallon in t^{1} , city of Quebee, but the farmers of the Island cannot eveniently eater to the city trade, owing to the long trip over land and water.

The material required for making consists of moulds, which cost 10 cents or \$1.20 a dozen, pans for the draining of the curd while in the moulds, 75 cents racks, 60 cents each, pans for the rack, \$2, mats, 20 cents, pieces of cloth, 3 cents table cloths, \$1.

The salt for one dozen cheese costs & cent, parchment paper or cloth for the and 1 cent, and help for manufacturing one dozen cheese, & cents.

In Quebec, the cheese is sold wholesale, one dollar a dozen. With these figure it is an easy matter to figure out the cost of the cheese to the maker and the paderived.

For a dozen cheese, four gallons of milk are required, whic... at 12 cents per ga is worth 48 cents. The salt paper or cheese cloth and labour cost 94 cents, or a of \$0.574 for a dozen. The renuet costs so little that it is considered a negliquantity.

Taking into consideration the cost of material, the following figures are aris at for a quantity of 150 dozen cheese, the output of an ordinary farm :---

2	dozen monlds at \$1.20 a dozen	2	40	
1	pan for draining moulds	0	75	
5	racks at 40 cents each.	2	00	
2	pans for racks at \$2 erch	4	00	
7	inats at 20 cents each	1	40	
5	pieces of eloth for ripening at 3 cents each	ī	05	
2	linen table cloths at \$1 each	2	00	
	Total	3	60	

If the annual wear and tear of this material is estimated at 10 per cent of itsthis leaves a sum of \$1.36, hardly 1 cent a dozen to be added to the cost of manturing 150 dozen cheese. The total cost of production is 585 cents, or in round nu-59 cents. As the wholesale price is \$1 a dozen, the profit is 41 cents.

The number of cheese made at St. Picrre yearly is from 1,200 to 1,500 dozen, an average of 135 dozen per farm. The total profit thereon is \$553.50, which, division among the ten families engaged in the industry, gives \$55.35 per family. The quantity of milk used being 5,400 gallons or 54,000 lbs., the milk is therefore sold 25 cents a gallon, 10 cents of which is left to the maker. The price obtained for the milk according to the usual mode of computing in ordinary factories, is \$2.0 a hund.ed pounds.

Acknowledgment.—In closing this article on the Island of Orleans cheese, I have a very agreeable duty to perform. I beg to present to my readers Mde. Joseph R. Roberge, one of the best cheesemakers of the Island. (See Fig. 2, Plate IV.)

As already stated. Madame Roberge belongs to the Gosselin family, the member of which were among the best cheesemakers of the Island, from generation to generation.

In the preparation of this work, I am greatly indebted to Madame Roberge at to her husband, Monsieur Joseph P. Roberge, who very kindly and obligingly, through several interviews and many letters, gave me all the information that I required a end is me to write these notes. Madame Roberge expresses herself very implying speaking as well as in writing and her explanations were always in the first of the Roberge was kind enough to bring to me at Ste. Pétronille all the mate manufacture of the cheese, so that I might take photos to illustrate this article. Ib to tender them here my best thanks.

