



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

February 1957

CONSUMPTION OF BLUE CHEESE  
BY MINNEAPOLIS FAMILIES

by

Anthony L. Pavlick

and

Rex W. Cox

Multilith Report No. 510  
Department of Agricultural Economics  
Institute of Agriculture, University of Minnesota  
St. Paul 1, Minnesota

## CONSUMPTION OF BLUE CHEESE BY MINNEAPOLIS FAMILIES

Anthony L. Pavlick and Rex W. Cox

Patterns of cheese consumption vary from locality to locality and among population groups within a locality. This report is based on a study of cheese consumption by Minneapolis families. The purpose was to determine the attitudes, preferences, and patterns of cheese consumption by these families with particular reference to blue and roquefort cheese. The data for the study were obtained from a randomly selected group of 30 stores and from personal interviews with housewives of 500 randomly selected families.

Blue mold cheese or blue cheese, as it is usually called, possesses characteristics somewhat similar to those of roquefort cheese. Blue cheese, however, is made from cows' milk while roquefort is made from sheeps' milk. Blue cheese is domestically produced by a relatively small number of firms and only small amounts are imported. Roquefort cheese is an imported product.

### Production of Cheese

One-tenth of the milk produced in the United States in 1955 was used in the manufacture of cheese. Three-fourths of this amount was used in making American cheese, the most important of which is cheddar. The latter accounts for more than 90 percent of the output of American cheese.

Cheese other than American, which make up about one-fourth of the total production of cheese, include many varieties. The more important of these are listed in table 1.

In 1954 firms in Minnesota manufactured 61.3 million pounds of cheddar cheese or about 7 percent of the United States production and 1.2 million pounds of blue mold cheese or 13 percent of the total output of this cheese.

Table 1. Cheese Production, United States, 1955\*

Variety of Cheese	Amount Manufactured million lbs.
American	1003
Swiss	116
Munster	18
Brick	25
Limburger	5
Italian varieties	85
Cream	74
Neufchatel	6
Blue mold	10
All other varieties	19
Total	1361
Full skim American type	1
Cottage - creamed	567

\* USDA Statistical Bulletin 199, Production of Manufactured Dairy Products. November, 1956.

#### Sales of Cheese by Stores

There are about 20 kinds of cheese sold by stores in Minneapolis. Some of these cheeses are well known, others are known only to a small segment of consumers. Most stores offer a wide selection of cheeses, not only of the different kinds but also in the size of the unit of sale, brand, and packaging. For example, one of the larger meat markets displayed for sale as many as 31 kinds of cheese with about 160 different selections. Even the small grocery store sold on the average 7 different kinds of cheese with 23 different selections as to size of unit, brand, and packaging.

The kinds of cheese sold by local chain stores were on the average equal in number to those sold by the national chains but were offered in wider selections. There was also more uniformity among stores of local chains in the number of kinds offered for sale.

Blue cheese is available in most grocery stores. More than two-thirds of the thirty stores surveyed displayed domestic blue. Only four carried imported blue and nine carried roquefort. In this locality consumers may choose from 5 brands of domestic blue cheese, 2 brands of imported blue and 3 brands of roquefort.

Table 2. Number of Kinds of Cheese Available  
in Various Types of Stores

Type of Store	Number of Kinds Average	Range	Number of Selections
Independent			
Small	7	5-11	23
Super Market	11	9-12	40
Chain			
Group*	13	9-17	44
Local	19	18-21	93
National	19	11-25	84
Meat Market	30	27-33	160

\* A store is a member of a group chain if it buys and advertises jointly with other stores in its group but is independently owned and operated.

Price comparisons are difficult to make. Both blue and roquefort come in a variety of shapes and sizes. In general roquefort cheese is the most expensive and domestic blue the least expensive. There is, however, much overlapping of the price ranges.

Cheese prices also varied with the size of store, prices averaging lower in the larger stores. Among the larger stores, the prices of standardized cheese items were fairly uniform.

#### Shopping Habits

About two-thirds of the families buy cheese at the super-market while one-fourth buy at the corner grocery. The remainder buy cheese at the meat market, the cheese shop or the dairy store.

The housewife in more than one-half of the families reported that she bought the cheese. In about one-fourth of the families the husband and wife shopped together while in the remaining families, the husband shopped alone. These proportions hold for all types of stores with the exception of the meat market. It is seldom that husband and wife shop together at the meat market.

About one-third of the shoppers who buy blue or roquefort make the decision to buy at the cheese counter. This is an indication that impulse buying is quite significant in the consumers' decision to buy that type of cheese and suggests that attractive packaging and store displays may be particularly effective. Another one-third buys via the shopping list and the remaining one-third buys only for special occasions.

Blue and roquefort cheese usually come wrapped in either cellophane or tin foil. Many of the larger stores buy blue cheese in bulk, cut it up into convenient sizes, wrap it in cellophane and sell it under their own brand names. Ordinarily, they also sell blue cheese wrapped in tin foil by the manufacturer. About half of the housewives reported that they purchased this cheese in tin foil while about one-fourth usually bought it cellophane wrapped.

Only about 4 out of 10 housewives recalled having seen or heard cheese advertising to the extent of naming either the medium or the kind of cheese advertised. Processed cheese advertisements had been seen or heard by about two-thirds of this group while only about 10 percent had seen or heard cottage, cream or cheese foods advertisements. Television was mentioned most often as the advertising medium, followed by the magazine and the newspaper.

Many housewives registered an adverse attitude toward advertising by such comments as "Don't pay any attention to it," "Never listen to it," etc. It appeared that in a number of cases, this attitude affected the answer to the question as to whether she could recall having seen or heard any cheese advertising.

#### Consumption of Cheese

A wide variation exists among the families surveyed regarding the number of the various kinds of cheese used at one time or another. For example, 90 percent of the families have tried four or more kinds but only 10 percent have tried as many as 12 or more.

Table 3. Distribution of Families According to Number of Kinds of Cheese that Have Been Tried

Number tried	Percent of families
4 or more	90
5 or more	70
7 or more	50
8 or more	30
12 or more	10

On the average these families have tried 7 different kinds and for the most part the latter are included in the group of 10 fairly well known cheeses.<sup>1/</sup>

<sup>1/</sup> This group includes cheddar, colby, cottage, processed, blue, Swiss, cream, brick, limburger, and parmesan.

Information obtained from the survey revealed that 98 percent of the families had tried cheddar and 65 percent blue or roquefort.

Table 4. Proportions of Families Having Tried and Using Specified Kinds of Cheese

Kind of Cheese	Percent of families having tried	Percent of families using
Cheddar	98	73
Cottage	93	89
Blue or roquefort	65	27
Swiss	63	32
Cream	57	45
Brick	45	28
Limburger	42	6
Parmesan	38	25
Colby	29	22
Others	0 - 13	0 - 6

A comparison of the proportions of Minneapolis and United States families who have tried specified cheeses is provided in table 5.

Table 5. Proportions of Minneapolis and United States Families Who Have Tried Specified Cheeses

Kind of cheese	Proportion of families having tried	
	Minneapolis	United States*
Cheddar	98	95
Swiss	63	66
Limburger or Liederkrantz	42	37
Camembert	13	19
Blue or Roquefort	65	38
Munster	3	20
Gruyere	4	15

\* Alfred Politz Research, Inc., American Dairy Association Highlights Study, No. 3, 1954.

Cheddar is predominant in both groups.

Thirty-five percent, or 175, of the Minneapolis families interviewed had never tried blue or roquefort. Almost one-half of these did not indicate why they had never tried one or the other. Others emphasized the lack of appeal of the physical appearance, taste, or odor.

Table 6. Reasons Why 175 Housewives Interviewed Had Never Tried Blue or Roquefort Cheese

Reason given	Percent of housewives
"Don't care for cheese."	19
"Don't like the looks of it."	13
"Don't like strong cheese."	11
"Don't like the smell."	6
"Never heard of it."	2
"A party cheese--not for home use."	1
Other*	4
"Don't know."	44

\* Other includes "have never seen it." "doesn't sound good," "price too high," etc.

More than 80 percent of the families who have tried cottage and cheddar cheeses are more or less regular users of these cheeses. In the case of blue and roquefort, thirty-eight percent or 190 of the families interviewed have tried these cheeses but have rejected them as a part of their consumption pattern. Almost three-fifths of this group of families gave the strong taste as the main reason for rejection. Others mentioned the appearance or odor. Only a few indicated price as a factor. Price would not be given as reason very often by those who dislike the taste or odor and hence are not buyers.

Table 7. Reasons Why Families Who Have Tried Blue or Roquefort Cheese Do Not Use Either

Reasons given	Percent of families
Strong taste	58
Appearance	15
Odor	11
Price	4
Other	12

The rate of rejection of blue or roquefort is highest among the families with the lower incomes. Three-fourths of the families in the



low income group who have tried these cheeses do not use them at present, compared with about one-tenth of the families in the high income group.

Table 8. Proportion of Families on Various Income Levels Who Have Tried but Do Not Use Blue or Roquefort Cheese

Family income dollars per week	Percent of families
Less than 60	76
60 - 139	62
140 - 229	45
230 and over	9

Minneapolis families included in the survey use on the average from 4 to 5 different kinds of cheese. One out of 10 families uses as many as 11 kinds over a period of time. From one to 2 percent of the families do not use any cheese.

Families in the high income group not only have tried more kinds but use more kinds than families in other income groups. Also, families in which one or more members have extended their education beyond the twelfth grade use more kinds. For example, families in the high income group whose educational level is the highest among the families surveyed use on the average six or seven kinds of cheese. This is twice the number used by families in the lower income group whose education did not extend beyond the twelfth grade.

Only two kinds of cheese, cottage and cheddar, are used more or less regularly by more than one-half of the families included in the survey. Only 28 percent use either blue or roquefort or both.

Table 9. Proportion of Families Using Various Kinds of Cheese

Kind of Cheese	Proportion of families
Cottage	89
Cheddar	73
Cream	45
Swiss	32
Blue or Roquefort	28
Parmesan	27
Colby	25
Limburger	22
All others	Less than 10

The influence of income and occupation of the head of the family on the proportion of families using blue or roquefort cheese is in part shown in table 10. Five times as many families in the high as in the low income group are fairly regular users of either or both of these cheeses. A much larger proportion of families in the professional or semi-professional class use blue or roquefort compared with families in the other classes within the respective educational and occupational groups. Available data also indicate that the proportion increases as the level of education becomes higher.

Table 10. Proportion of Families Using Blue or Roquefort Cheese on Various Income and Occupational Levels

Family Income	Proportion of families using
dollars per week	
Less than 60	13
60 - 139	24
140 - 229	43
230 and over	64
Occupational group	
Labor	21
Sales, clerical, self-employed, management	31
Professional and semi-professional	41

The actual effect of these three factors on the proportion of families using blue or roquefort cheeses is obscured because of the interrelations among the factors. For example, it is likely that the high income group includes families of the professional or semi-professional class and the latter includes families of which one or more members have had some college training. The effect of any one of these factors where the others are held constant cannot be determined because of the small number of families in the various sub-groups that would result from such an attempt.

Families using blue or roquefort or both have tried more kinds, and use more kinds, of cheese than other families. These families have tried on the average about 10 kinds, and use about 7 of these; the families which do not use blue or roquefort have tried 6 or 7 kinds and use 3 or 4 of them.

Accurate estimates of consumption for the various cheeses are difficult to obtain. Unlike such commodities as butter or margarine, cheese consumption patterns are not very regular and for many types of cheeses the packaging is not standardized. Added to this is the relative un-

familiarity of housewives with the weights of standardized cheese packages.

### Use of Blue and Roquefort

Of the 500 families surveyed, 134, or 27 percent, used blue or roquefort or both. Of this group about one-third used blue, one-third used roquefort, and one-third used both. One-half of these housewives reported that they were able to distinguish between blue and roquefort, however there may be some doubt whether some can distinguish other than by label. Among those who reportedly could distinguish, the preference for roquefort over blue was about 3 to 1. The reasons given by those preferring blue cheese were taste and the lower price. Taste was also the main reason given by those who preferred roquefort. Of those who preferred roquefort only about 50 percent used roquefort exclusively, while 10 percent of this group used blue exclusively.

About one-third of the 134 families who used blue or roquefort or both had tried imported blue cheese. Of this group 80 percent expressed no preference between the imported and the domestic. Of the remaining 20 percent, the preference was evenly divided between the two. One-third of the families using blue or roquefort or both reported not having tried imported blue and another one-third did not know whether they had tried it.

About 40 percent of the families using blue or roquefort first tried it in their homes, 28 percent at the house of a friend, 15 percent at the home of parents, and 15 percent at a restaurant.

Blue or roquefort cheese is served the year around in more than one-half of the families using this type of cheese. In about one-third of the families it is served mainly in the winter.

The favorite way of serving blue or roquefort cheese was as a snack. Two-thirds of the housewives who now use this type of cheese first tried it as a snack. About 8 out of 10 of these housewives reported that they now serve it in this way. Somewhat less than one-third of the housewives first tried this cheese in a salad; about two-thirds of the housewives now serve it that way. Blue or roquefort is used in other ways, such as in a dessert, on toast, steak, etc. Although only 5 percent of the housewives first tried this cheese in one of these ways, at present 20 percent serve it in one or more of these ways.

This study of the consumption of cheese by Minneapolis families indicates that only a minority of families are more or less regular users of blue mold cheese. This means that both blue and roquefort cheeses are speciality items possessing characteristics that have an appeal to a limited number of consumers.

The expansion of the market for domestic blue cheese depends in part on the substitution of blue for roquefort, but more important, it depends on an increase in both the proportion of families using and the frequency of serving blue cheese.