

BULLETIN 16

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# Urban Use of Alaskan Farm Products



Alaska Experiment Station

Palmer, Alaska

## FOREWORD

Agricultural development in Alaska was hampered for years by a small and undependable local market. This no longer is the case. Post-war developments have brought thousands of new consumers to urban areas and they are still coming. Agricultural production has more than doubled during this period but has not kept pace with the potential market.

This study shows producers and marketing agencies alike what they must do to get more of their products into urban kitchens. This guide will help farmers "Sell Alaska to Alaskans."

*Don L. Irwin*

Director

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### COVER PHOTO

Fertile soil and good plants are the first requirements in satisfactory farming. SCS technicians using soil augers to see below the surface can tell this Tanana Valley farmer what his soil is like. Field samples of soil can be tested through the Extension Service to learn what fertilizing elements are needed.

Photo by SCS

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AGRICULTURAL EXPERIMENT STATION  
PALMER, ALASKA  
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IN COOPERATION WITH THE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH ADMINISTRATION

# URBAN USE OF ALASKAN FARM PRODUCTS

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## SUMMARY

Nearly 300 families in Fairbanks and Anchorage were interviewed during the summer of 1951 concerning their buying habits and ideas on foods that could be grown in Alaska. With slight regional differences due to local supply problems, families in both cities were in close agreement on what they wanted and in what they actually bought. Indicated rates of consumption for major food items produced locally are shown in the following summary table:

### PER CAPITA CONSUMPTION IN THE U. S. COMPARED TO FAIRBANKS AND ANCHORAGE, ALASKA

Food item	Unit	1950 <sup>1</sup>	1951 - 52	
		U.S.	Fairbanks	Anchorage
Potatoes	lb.	104	134	148
Carrots	lb.	11.9	24	24
Turnips & rutabagas	lb.	16.9 <sup>2</sup>	2 <sup>2</sup>	4
Head lettuce	lb.	16.9 <sup>3</sup>	36	26
Cabbage	lb.	33.8	14	13
Celery	lb.	11.2	8	13
Cauliflower & greens	lb.	2 <sup>2</sup>	8	8
Milk	lb.	480 <sup>4</sup>	5	437
Eggs	eggs	394	478	490

<sup>1</sup> Latest available year. Source: The National Food Situation, Bureau of Agricultural Economics, U.S.D.A. July-September, 1951.

<sup>2</sup> Per capita data on these items not available.

<sup>3</sup> Includes escarole.

<sup>4</sup> Fluid, condensed, evaporated and non-fat dry milk solids.

<sup>5</sup> Data biased by local conditions. Not comparable.

Most people wanted medium-sized, clean, fresh and firm vegetables. They appreciated neatness of display, well-trimmed produce, refrigeration and humidification of perishables and convenience of location for all items. Most store customers were unable to differentiate between locally grown and shipped-in produce unless they were labeled by signs or advertising wrappers. The longer people live in Alaska, the more prone they are to prefer local products.

In both cities, about 38 percent of the milk consumed was fresh. All fresh milk consumed by reporting families in Anchorage was from local farms while only 58 percent in Fairbanks was local; the rest was airborne. Local milk was poorly accepted by Fairbanks women. Evaporated and concentrated milk accounted for 1/2 of the consumption in both cities. The "canned cow" is more popular than the live one in Alaska.

<sup>1</sup> Part of the information was collected and some of the analysis was made by John J. Meehling. Appreciation is expressed to him and to the nearly 300 housewives who made this study possible. This project was supported by the Research and Marketing Act funds.

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Consumption of eggs was nearly 25 percent above the average in the States. People used all the local eggs they could get and completed their needs with eggs shipped-in by air, truck or boat.

Per capita consumption for most products raised in the Territory is higher than average for the States. We have younger, more active age groups that eat more potatoes, eggs and milk.

This study has confirmed the oft-repeated statement that Alaskan farmers can sell much more than they have been able to produce in recent years. Demand for almost all kinds of good quality produce is active and unsatisfied at all seasons. Increased production, more efficient production, better packaging, more uniform grades, improved storage for post-season sales, better display methods and other merchandising features will make it possible to sell larger volumes of local products at somewhat lower prices than are necessary now. Lower production costs, in turn, will improve the competitive position of local products. Urban families will buy significantly larger quantities of locally grown foods per capita than they have been able to so far.

Farmers, their marketing agents and retailers must share joint responsibilities in providing consumers with the very best quality of Alaskan products possible. Few urban families will "buy Alaskan" simply to support local industry. They want their money's worth—and Alaska can provide freshness, succulence and flavor not possible in most produce shipped in from the States. The following chart provides a working list of recommendations to help producers and retailers boost sales of Alaska's farm products.

**RECOMMENDATIONS FOR IMPROVED PRACTICES BY  
PRODUCERS AND RETAILERS TO INCREASE DEMAND  
FOR ALASKA-GROWN PRODUCE**

Product	PRACTICES RECOMMENDED FOR:	
	Producers	Retailers
Potatoes	Sell only washed and graded potatoes Reduce mechanical injuries Provide optimum storage conditions "Season" potatoes before selling for immediate retail consumption Plan marketings to last at least through the winter	Buy only washed and graded potatoes Indicate source of potatoes Locate bins at levels convenient for the shopper Locate displays in cool place, out of direct sunlight Keep bins free of culls Sell potatoes both by bulk and by bag Sell only "seasoned" local potatoes

Root crops	<p>Sell only high quality Wash and polish root crops Use modern packaging techniques - prepackaging for eye-appeal Provide adequate storage to hold supplies in top quality until needed Grow more carrots, turnips, rutabagas and radishes</p>	<p>Buy and sell only clean, high quality products Tag containers as to source of product Keep produce fresh with cooled display cases or use of crushed ice Keep displays neat Keep displays out of the sun</p>
Green and leafy vegetables	<p>Sell only high quality, neatly trimmed produce Grade produce into sizes Provide cool room and cold room storage for head lettuce, celery, cabbage, etc. to extend the marketing season Prepackage, using modern merchandising techniques</p>	<p>Refrigerate all of these items Keep displays neat and fresh Handle only top quality produce Adjust prices to quality of produce Sell a selection of sizes, with emphasis on medium sizes</p>
Berries	<p>Grow more Keep abreast of any developments in new varieties, production practices or harvesting methods that will reduce production costs</p>	<p>Keep in cool place to minimize deterioration</p>
Milk	<p>Reduce seasonal fluctuations in supply Maximize production efficiency to reduce costs so retail prices can be reduced leaving a fair profit for production Experiment with new containers and packaging processes to minimize acquired flavors and paraffin in the milk</p>	<p>Keep under refrigeration Keep away from certain odors</p>
Eggs	<p>Increase production Reduce seasonal fluctuations in supply Store eggs in a cool moist place Market frequently Sell only candled and graded eggs</p>	<p>Keep eggs in a cool place Sell only graded eggs Identify source of eggs Sell some 1/2 dozen cartons</p>

## INTRODUCTION

A healthy aggressive agricultural industry must work steadily to maintain and increase demand for its products. Production is useless without sales; produce moves only when farmers have something consumers want. The market can be increased through reaching new consumers, reaching regular consumers more frequently, or growing more of the things consumers want. Passive production will not do the job; advertising and merchandising are required of producers as well as of retailers.

Merchandising is an idea new to many farmers and to some produce handlers. Many do not recognize the relationships existing between their production, harvesting or handling practices and the demand for their products by city housewives. Alaskan farmers are particularly vulnerable to consumer demands because they have no alternative to the Alaska market.

The study reported here was conducted to provide more information about consumer buying habits, consumer preferences, and consumer criticisms of food items that can be grown in Alaska. Anchorage and Fairbanks, the 2 largest potential markets for products of Alaskan farms, were chosen for the survey. Both are highly dependent for their well-being on nearby military establishments. Both adjoin major areas of agricultural development.

Sampling was difficult because adequate records were unavailable for population density, family income data, family size, racial characteristics or other usual measures of population performance. To overcome these problems as much as possible, city maps were acquired and city officials were consulted about the characteristics of each area. In each city a reconnaissance was made and information was collected from families in proportions roughly approximating their apparent importance in the population. In cases where wives as well as husbands were working, evening calls were made.

The survey was made in July and August of 1951. In addition, monthly reports were solicited from all cooperators who would complete them for the period of September 1951 to August 1952. Roughly half agreed to do this, although many dropped out during the first months. About 25 percent continued through the year. A total of 90 families was interviewed in the greater Fairbanks area including Fairbanks city and its suburbs of Graehl, Hamilton Acres and Lameta. Because Anchorage is considerably larger than Fairbanks, 200 interviews were completed in the greater Anchorage area including Anchorage city and its suburbs of Government Hill, Mountain View and Spenard.

Thirty-eight percent of the families had incomes of \$5,000 or less, another 37 percent were in the \$5,000 to \$7,000 bracket and 25 percent had incomes of over \$7,000 per year. Small families of one or two persons comprised 35 percent of the group, families

of three or four made up 40 to 45 percent and approximately 22 percent were families of five or more persons. The average family consisted of 3.3 persons of whom 2.1 were 14 years or older. There were 1.2 wage earners per family.

The families interviewed in both areas were remarkably alike in their characteristics. In each income group, 50 percent of the families questioned had lived in Alaska over 5 years and about 45 percent had resided in the same locality for at least 5 years. In each city, 33 percent of the families had been in Alaska 10 years or more and 25 percent had resided in their respective local areas for 10 years or more. Thus old settlers, new settlers and military personnel were adequately represented in the samples.



High quality foods in attractive packages bring customers back. These brands are in use on the Anchorage market.

Many families here 2 years or less were military personnel and expected to leave again as soon as their tour of duty was completed. The proportion of military personnel to civilians was greater in metropolitan Fairbanks than it was in metropolitan Anchorage.

## THE IMPORTANCE OF HOME GROWN PRODUCTION

Despite the newness of many residential holdings and the raw nature of the soil, 36 percent of the Anchorage families grew gardens. A slightly smaller proportion of gardens in the Fairbanks area probably was attributable to the higher proportion of military families in that population sample and possibly also to less satisfactory opportunities for family gardens.

Small gardens were the rule; nearly half were of 400 square feet or less. Only about one in six contained over 800 square feet. Many families were indulging their urge to make things grow. Others were curious to see *what* would grow. Their primary objective, however, was to reduce to some extent the high cost of fresh produce and to enjoy a wider variety of vegetables in their diets. Over 1/2 of the Anchorage housewives and over 1/3 of those in Fairbanks stored small lots of potatoes, carrots, cabbage and turnips from their gardens for immediate use. Few gardens were sufficiently large to provide storable vegetables for all winter needs. Nearly 1/3 of the families canned or froze small amounts of home grown produce.

A few suburban families kept small flocks of poultry to provide their own eggs and poultry meat. No cows or milk goats were reported.

## CONSUMER USE OF AND COMMENTS ABOUT ALASKA'S TRUCK CROPS

If farmers, processors and retailers can determine what women want (or, conversely, what particularly is disliked) they will be in a better position to grow, handle and merchandise products having the widest possible appeal. This report is based on the volumes of selected products used by these families and an analysis of what needs to be done to increase amounts of Alaskan products used by urban Alaskans.

### *Potatoes*

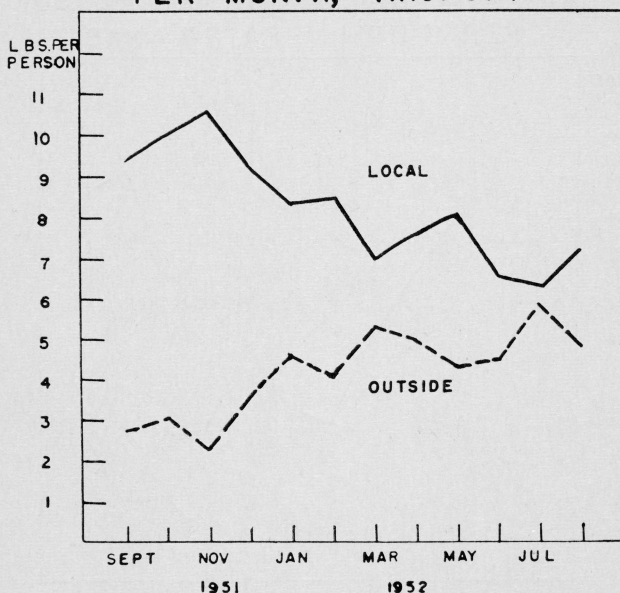
The U. S. average per capita consumption of potatoes in 1951 was 104 pounds. It has been decreasing steadily for the last 30 years. Anchorage families reporting for this survey used an average of 148 pounds per capita in 1951-52. Local potatoes accounted for 66 percent of these. Consumption of shipped-in potatoes was lowest when local supplies were plentiful. During the 4-month period September-December, 9.75 pounds of local potatoes were used per capita per month to 2.93 of Outside potatoes. Overall consumption was very even throughout the year, being 13 pounds per month during the winter (October-February) and 12 pounds for the rest of the year.

In Fairbanks, fewer local potatoes were available for civilian trade and 51 percent were shipped-in from the States. Seasonal selec-



tion between sources was much more pronounced than in the Anchorage area. During the period September-December, when local potatoes were freely available, Fairbanks people used an average of 8.32 pounds of locals compared to 3.15 of others. The proportion of local potatoes dropped very rapidly as they became scarcer in the area and by spring the situation was reversed with 8.78 pounds coming from Outside and 3.21 from local sources.

### POTATO CONSUMPTION PER PERSON PER MONTH, ANCHORAGE



Anchorage families used 13 pounds of potatoes per capita. Two-thirds of these were locally grown. If more local potatoes were available, even more would be consumed by urban families.

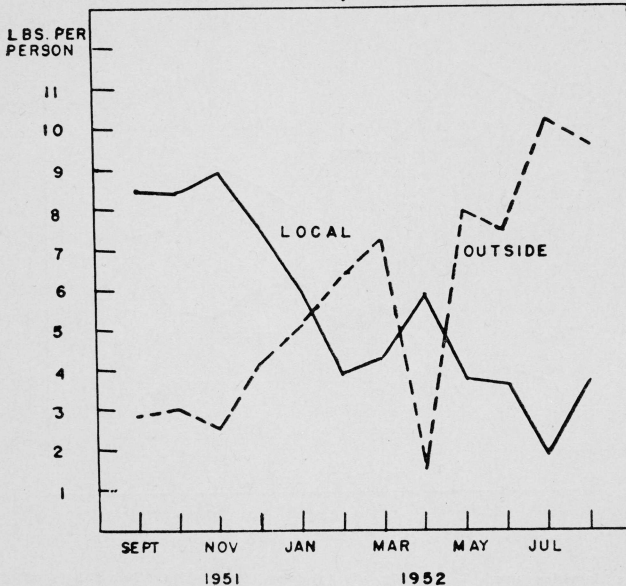
Since over 75 percent of fall consumption was of local potatoes, additional tonnages could be sold during the remainder of the year when Alaska stocks now are unavailable. Additional volumes may be sold to new customers after current ones are satisfied if sound merchandising practices were followed.

Of the families visited, over 40 percent favored local potatoes, slightly less than 30 percent had no preference for either kind and only about 30 percent definitely preferred those from Outside. Judgements generally were based on flavor, cookery problems and keeping quality. Local potatoes were chosen by some people because they were sweeter and less dry than Outside ones when cooked. Conversely, Outside potatoes were preferred by some people because they were more uniformly graded, resulted in proportionately less

waste, were more mealy when cooked and kept better in the home than did Alaskan potatoes. Many newer families commented that they did not like the sweet flavor of Alaska potatoes.<sup>2</sup>

Family preference for potatoes is complicated by many conditions including differences in price, or perhaps some families brought certain acquired taste habits from their former homes. No primary relationship seems to exist between size of family or age of family head and family preference for local potatoes.

### POTATO CONSUMPTION PER PERSON PER MONTH, FAIRBANKS



Farmers in the Tanana Valley were unable to supply the demand for good quality potatoes. The proportion of local to shipped-in potatoes used during the Fall was about the same as for Anchorage, but the supply was used up more rapidly.

The longer a family lives in Alaska, the more apt it is to prefer Alaskan potatoes. For example, nearly 60 percent of first-year residents claimed to have no preference for either local or shipped-in potatoes. Two- or 3-year residents were almost evenly divided in preference between locally grown and shipped-in stocks with about 40 percent having no preference for either. Seventy-six percent of families who had been here 15 years or more preferred Alaskan potatoes.

The family attitude toward Alaska as a permanent home also was a factor in its food selection habits. In both Anchorage and

<sup>2</sup> This sweet flavor is caused by prolonged storage at relatively low temperatures (33°-36° F) but can be largely overcome by holding the potatoes at room temperature (about 70° F) for two or three weeks after removing them from storage.

Fairbanks, 54 percent of families who planned to make Alaska their permanent home preferred local potatoes. Of those who expected to leave, only 18 percent in Anchorage and 33 percent in Fairbanks preferred local potatoes. The majority of the "visitors" preferred the kind they were used to when living in the States. As there were more military families in the Fairbanks population sample, the high proportion of those people preferring shipped-in potatoes thus may be explained. Also, there may have been a reaction to the quality of Tanana Valley supplies currently available on the market.

Consumer reaction to the manner in which potatoes were displayed and handled by the stores was more favorable than might have been expected from observations and from previous surveys. Sixty percent had no complaints and less than 25 percent offered suggestions for improvements. Complaints included that both local and Outside potatoes were poorly graded, locals often were dirty **and the proportion of waste too great.**<sup>3</sup> Potatoes should be bagged for those who prefer prepackaging and binned in bulk for those who prefer to pick out their own. Much of the retailer's problem in disposing of culls left in his display bin would be solved by refusal to handle low grade or ungraded potatoes. Stores selling only potatoes that met U. S. No. 1 grade had no difficulty handling locally grown potatoes in competition with Outside ones. Price differentials of about 2 cents per pound for shipped-in potatoes were prevalent, although there was evidence that this range can be narrowed.

Comments were recorded about the poor location of potato displays in several stores. Some bins were on the floor where it was hard to get at them. Others were in the sun or near hot radiators where the potatoes deteriorated rapidly.

Few women in either Anchorage or Fairbanks were sure they could tell the difference between local and Outside potatoes by their appearance. Possibly this occurred because the interviews were conducted in the summer when "early" potatoes from the States were on the market in competition with those first harvested in Alaska. Many women suggested that containers should be clearly marked as to source and grade of product.

In both cities, medium-sized (about 3 inches), uniform, clean, smooth, firm potatoes free from waste were preferred. When particular sizes were mentioned, smaller ones were used for stews or boiling and larger ones were bought for French fries and baking.

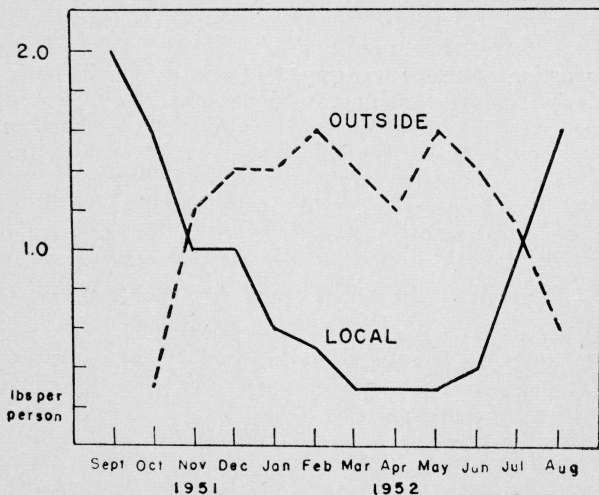
About 25 percent of the women would buy more potatoes if their suggestions for improved conditions were followed. If the potatoes looked better—and the price was not out of line—they would buy fewer substitute starchy foods. Thus, more local potatoes could be sold in competition with those shipped-in from the States.

<sup>3</sup> Among the causes for waste are discolored bruises and cracks due to improper or rough handling; and rotten spots, roughness and withering due to improper storage and grading.

### Carrots

Average per capita consumption of carrots per year in the States was 11.9 pounds in 1950. Demand for carrots in Anchorage during 1951-52 was steady at about 2 pounds per capita per month. Local carrots comprised about 35 percent of the total. Some Outside carrots were used every month and some locals were used in all but 3 months of the year. During August to November, local carrots accounted for 75 percent of the marketings. During the spring and early summer the entire Anchorage supply was shipped-in from the States.

### PER CAPITA CONSUMPTION OF CARROTS BY SOURCE ANCHORAGE & FAIRBANKS 1951-1952



Alaskans apparently eat about twice as many carrots as do people in the States. Local carrots comprise about 75 percent of marketings when they are available. Production and storage problems have limited carrot acreages in the past.

Per capita consumption in Fairbanks apparently was about the same as in Anchorage, but local carrots provided 50 percent of the total. Because Fairbanks is a smaller market, the 1 or 2 farmers growing carrots primarily for the civilian trade were able to supply it for a longer period of time.

Few farmers are equipped to grow carrots economically and fewer still have storage or are interested in continuing sales during the winter. Consumers very definitely would buy more local carrots if they were on the market—particularly if quality and appearance were good.

### Other root crops

The supply of locally-grown root crops is limited and is available for a relatively short season. A small but steady market exists

for a larger volume of sales and for a longer season if they can be made available.

Most varieties of beets tend to "bolt" (go to seed) in Alaska rather than to form roots as they should. Therefore, they are not grown commercially, as a rule, except for greens. Radishes have been a poor money crop because root maggots attack them all during the growing season. Recently developed insecticides should encourage increased radish production by controlling the maggots. Families wanted more local radishes.

Several women could not find turnips, beets and rutabagas most of the time. Turnips and rutabagas grow well in Alaska and apparently reach a small ready market. The Anchorage families in this study used an annual average of 4.1 pounds per capita. The seasonal distribution of demand for locals was even more striking than in the case of potatoes. *Without exception*, no Outside turnips and rutabagas were purchased while Alaska stocks were available and the per capita volume of Alaska stocks used each month averaged twice as much as the volume of shipped-in supplies when they were used. Local stocks accounted for 71 percent of total consumption and indications were that the entire market for these crops during most of the year could be met by local production if stocks and proper storage were available.

Data for Fairbanks were too sparse for analysis. It would appear, however, that these families use larger quantities per capita than do Anchorage people and that local supplies were consumed by late December. Over 60 percent of the turnips used were locally grown.

Less than 25 percent of the women could tell the difference between local and Outside root crops as displayed in the stores. Yet many definitely preferred local root crops because they were sweeter and more tender than shipped-in items. Consequently, good quality local produce should be marked as such.

The women pointed out that most displays should be neater and that culls should be removed promptly. Coolers for the displays were suggested as well as a fine spray of water or a little crushed ice to keep things fresh and attractive. Displays should be kept out of the sun. The women wanted a good variety and selection of fresh, clean and well-trimmed root crops undamaged by worms. To indicate freshness, it was suggested that the tops be left on vegetables. This practice, of course, increases transpiration and consequent earlier deterioration.<sup>4</sup> Here again, most people prefer medium-sized vegetables, but others want smaller ones for eating fresh and larger sizes for cooking.

Seventy-five percent of the women suggesting improvements in marketing practices on root crops would increase their use of them if the suggested improvements were made.

<sup>4</sup> Prepacking in plastic bags has been developed since these reports were collected. The demand for tops on root crops probably will decline rapidly.

*Green and leafy vegetables*

Lettuce, primarily head lettuce, has popular demand throughout the year. Per capita consumption in Anchorage averaged 2 pounds per month, rising to 2.5 pounds during July and August. Consumption in Fairbanks seemed to be about 50 percent higher than in Anchorage, but the small population sample makes definite statements unwise.

Seasonal local supply was plainly visible in the consumption data. Local stocks appeared on the market in July, reached their peak in August and largely disappeared by late November or early December. Alaska-grown lettuce amounted to about 30 percent of the annual per capita consumption.

Celery, also, had a small but steady market. Most people ate about 1 pound per month the year around. The Alaska supply met about half the demand during its season of August through November.

Approximately 18 pounds of cabbage were used annually by the average Anchorage person; of this, 35 percent was locally grown. The season is considerably longer than for lettuce and celery because a few farmers have adequate storage, grow varieties that store fairly well and maintain their marketings into January. If Alaska could develop a better cabbage for storage and adequate cheap warehousing, the farmers could grow greater acreages for winter sales.

Fairbanks families appeared to use slightly less cabbage and slightly more head lettuce than those in Anchorage. This probably results from the insufficiency of local production of both crops and the propensity of retailers to stock airborne head lettuce rather than the cheaper and more prosaic cabbage.

Cauliflower and broccoli, Brussels sprouts, kohlrabi and greens were less in demand than were the crops mentioned previously. They border on being specialty foods rather than regular items in the diet. Mustard greens were popular with people from the southern states; beet greens, leaf lettuce, spinach, swiss chard and similar vegetables were eaten occasionally although they are seasonal foods. Most were available commercially for a short time, if at all, from local gardens. Even so, our informants reported that over 40 percent of their greens were Alaska-grown. Of the approximately 8 pounds used per capita, 3.5 pounds were locally grown. Several families froze or canned greens. The supply of all these crops was uncertain and did not meet the demand.

Alaskan diets probably are more deficient in green and leafy components than in almost any other food group. Late winter and spring diets become very monotonous because most families have tired of canned greens and shipped-in greenstuffs. Annual consump-

tion per capita of 4 items in this group amounted to 60 pounds of which 30 percent was locally grown. This 60 pounds was bolstered slightly by luxury items such as radishes, green onions, chives, frozen fresh vegetables and others from the States.

Nearly 80 percent of the women were satisfied with the appearance of the leafy vegetables as displayed. Because these usually deteriorate more rapidly than root crops and also because they usually are more expensive, a higher proportion of the stores keep their leafy vegetables under good conditions. Refrigerated display cases are a "must" in the minds of our informants. Also high on the list were freshness of product, high quality, wider selection, cleanliness, use of better trimming practices, and neater displays. Use of cooled display cases, greater use of crushed ice or a fine spray of water over displays again were mentioned for keeping vegetables fresh.

Housewives complained because storekeepers did not reduce prices for damaged or wilted produce. They reasoned that such goods were not worth the same price as fresh produce. Firm heads of lettuce and cabbage were highly desirable but most families found the cabbages too large. Generally speaking, the medium-sized leafy vegetables were preferred and most people wanted green rather than blanched produce.

As with potatoes and root crops, many women were unable to distinguish between local and Outside leafy vegetables. Therefore, the wise Alaska grower with a good quality product could well-afford to indicate its source. Many women, who recognized local vegetables, commented on the flavor, crispness and freshness of local leafy vegetables found in the better stores. More green and leafy vegetables could be sold to nearly 75 percent of the families if the suggestions above were followed.

#### *Alaska-grown berries*

The market for local berries, both domestic and wild, appears to be worth encouragement. Production costs of cultivated berries are high and help for picking is expensive and hard to find. If these cost problems could be solved and somewhat better berries developed, many urban families would buy appreciable quantities of them.

During the summer of 1950, about 35 percent of the families contacted gathered a few quarts of wild berries and a few harvested enough to process for the winter. Picking opportunities are likely to decrease because several families mentioned driving further each year and finding fewer berries.

Only a few people were able to buy local cultivated berries from neighbors, peddlers or an occasional commercial grower. They very rarely were available in local stores. By far the leading suggestion for increasing sales simply was to have more berries available. Most families would buy.

## FARMER'S MARKETS, FARM HOMES AND STANDS AS MARKET OUTLETS

Farmers whose homes adjoin a major highway can sell considerable farm produce directly to consumers. Practically everything that can be grown in Alaska has been sold at the roadside at one time or another. Over 1/2 of the people interviewed had bought produce from farm homes, stands or markets in the States. Over 90 percent would buy from a farmer's market if one were operating in their trade area. Farm homes or highway stands were less popular. Direct sales were popular because the items offered were fresher and quite often cheaper than those found at local stores. Some people preferred local produce and others bought because the produce often was not available in stores. Most people knew of no place where produce was being sold in a stand or at the farm.

Items most frequently suggested for a farmer's market were fresh vegetables and potatoes. Next were eggs, chickens and berries. All kinds of meats, home-baked goods, home-canned goods, flowers, fancywork or any other local products also were suggested.

Some people had their own gardens and were uninterested in farmer's markets or roadside stands. Others had no transportation or preferred to do all their shopping at a single store. Many military or railroad employees bought through commissaries. Some people simply said they bought too little to pay for a trip to a roadside stand or a farmer's market.

## USE OF MILK IN CITY HOMES

A greater fluid-equivalent of evaporated than of fresh milk was used by families in both Anchorage and Fairbanks during the year of this study.<sup>5</sup>

In the Anchorage area local fresh milk was 38 percent of fluid-equivalent consumption compared to 41 percent evaporated, 14 percent powdered and 7 percent concentrated. No airborne fresh milk has been reported during the survey period. However, airborne milk has been sold in quantity since the study was completed. The concentrated and powdered products apparently were used as emergency supplies rather than as a steady source. This conclusion is bolstered both by scattered purchases and by the correlation between large purchases of these supplies at (1) vacation time and (2) shortages of local fresh milk. At certain seasons, the Matanuska Valley dairymen are unable to meet the demand for milk. One of these periods is November-December before the bulk of the fall-freshening cows come into production and the other is during May-June when supplies of roughage are short and before pastures are good. The major milk-marketing problems for the Anchorage area

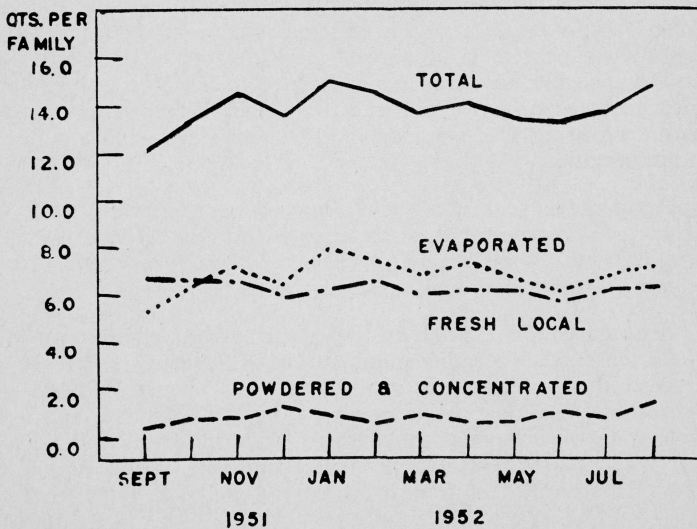
<sup>5</sup> To make demand comparisons, it was necessary to convert concentrated, evaporated and powdered milk to a fluid basis.



appear to lie in increasing overall production and in leveling out the seasonal peaks and depressions of supplies.

Anchorage residents, unlike those in Fairbanks, had no opportunity to buy airborne fresh milk from the States. Several stores had carried Outside milk for a while in previous years but had discontinued the practice. Among other reasons for discontinuing the shipments was the increased production from the Matanuska Valley. Seventy-one percent of Anchorage housewives preferred local fresh milk to other kinds of milk when they could get it. Fresh milk is quite expensive, however, and many women could not afford as much of it as they would have liked. Most bottle-fed babies were started on evaporated milk and thus come to prefer it.

### WEEKLY PURCHASE OF MILK ANCHORAGE



The short supply of locally produced milk makes it necessary for urban families to depend largely on evaporated milk. Families that have been in Alaska more than 5 years use more milk than families here less than 5 years.

One common complaint against local milk in Anchorage concerned the paper cartons. Some thought the milk acquired a distinct taste and others objected to finding bits of paraffin floating in it. Many people also like to see the cream line on the milk.<sup>6</sup>

Anchorage demand per person for milk increases both as the family increases in size and the longer the family stays in Alaska.

<sup>6</sup> These complaints point to mechanical difficulties at the dairy plant. Paper cartons, when properly handled, have been eminently successful in the States. Glass bottles are more expensive due to shipping costs, breakage and loss of bottles.

Two-member families used an average of 3.68 quart-equivalents per week per person, three-and four-member families used 4.60 and five-or six-member families used 5.93 quarts.<sup>7</sup> Families in Alaska 5 years or less used 13 quarts per week while those here over 5 years averaged 20 quarts. These volumes represent 4.05 quarts per person per week for families in Alaska 5 years or less and 4.95 quarts for families here longer than 5 years.

Although the sample was small and the statistics were relatively unrefined, it would appear that Anchorage people were getting the fluid-equivalent in fresh, concentrated, evaporated and powdered products of about 437 pounds per year. This is comparable to the 1950 U. S. average of about 420 pounds. If these Alaska data seem to be high in relation to U. S. averages, it should be remembered that our population is composed of younger families with more children than is average in the States.

At the time of this study, fresh milk flown from the States was available in Fairbanks stores in direct competition with the local product. Of the families who used fresh milk, nearly 60 percent preferred the airborne milk, 36 percent used local milk and the remainder used whichever kind was available at the time. Many families used only evaporated or powdered milk. An unpublished survey made in Fairbanks during the summer of 1949 provided substantially the same information.

During the year for which housewives reported their food purchases, 23 percent of the milk used in Fairbanks was fresh local, 16 percent was shipped in by air, 29 percent was evaporated, 25 percent was concentrated and 7 percent was powdered.

Use of fresh local milk by these families began declining in the fall of 1951 and fell steadily month by month throughout the reporting year. Their average use of local milk in August 1952 was only 20 percent of the average for the previous October. Off-setting this decline were experimental purchases of airborne fresh milk followed by a switch to concentrated products beginning in February 1952. A few families also shifted to powdered milk at about the same time.

Because of the extreme situation existing in the Fairbanks area, there was little point in making further analysis of the data. Fairbanks housewives undoubtedly would utilize local fresh milk on the same basis as Anchorage women if their confidence was restored in the local product. If additional Tanana Valley farmers can solve their present production problems and get into Grade A production, a little merchandising and a good product will develop an active market for local milk.

<sup>7</sup> A recent California study based on reports for 1 week from families in Oakland and Los Angeles reported that "In Oakland the families with children consumed over twice as much fluid milk as those without children—14.5 quarts as compared to 6.3 quarts (per week). In Los Angeles the difference was almost as great, 14.6 quarts as compared with 7.4 quarts." Source: California Agriculture Vol. 7:3 March 1953.

## USE OF EGGS IN CITY HOMES

The average person in the U. S. used 397 eggs in 1951. During the 1951-52 year of this survey, Anchorage people used an average of 490 and Fairbanks 478 eggs. They are a relatively cheap food—besides being popular for breakfasts—and many families do more baking than their Stateside counterparts. Families used from 3 to 3 1/2 dozen eggs per person per month with no seasonal variations.



This attractive display by the Alaska Department of Agriculture at the Matanuska Valley Fair demonstrates the attractiveness of properly packaged farm products.

Local eggs accounted for 27 percent of all fresh eggs used in Anchorage. The supply seldom equals the demand at any season. Seventy percent used in Anchorage were fresh (local and airborne), 29 percent were from storage (boat and truck) and less than 1 percent were powdered.

Although it is well known that local eggs always are in short supply in Fairbanks it was surprising to find that they amounted to only about 2 percent of family requirements. Airborne eggs were the mainstay, accounting for 84 percent of the eggs used. Boat and truck categories combined provided the remaining 14 percent. No egg powder was reported.

The supply of local eggs from the Tanana Valley (Fairbanks) never has been equal to the demand and Matanuska Valley (Anch-

orage) production seldom has been without a market. Although production costs are high, the available eggs usually sell at a premium of 15 to 30 cents per dozen over those shipped-in by boat and 5 to 10 cents over those shipped by plane.

High prices and scarcity were such dominant factors in the supply that preference statistics mean little. People wanted local eggs and would pay the premium prices. Many people bought the cheaper eggs shipped by boat for use in baking and saved the locals for frying and for other uses where strict freshness is an asset.

Besides comments on the high prices, women in both cities mentioned a few examples where local eggs had not been graded or candled. Pullet eggs often were mixed with larger sizes, blood and meat spots frequently were found. A few thought that Alaskan eggs were low in nutritional value because flocks were housed for such long periods.<sup>8</sup>

According to the women, a few stores still are behind the times. They wanted eggs kept in a convenient place, refrigerated, graded into small, medium or large sizes and the cartons dated or plainly marked as to whether the eggs were local, airborne, boat or Canadian. Many families would like to buy in 1/2 dozen cartons. About 35 percent of the families would buy more eggs if they were available and if they were handled properly.

<sup>8</sup> This reasoning is fallacious, of course, since practically all commercial flocks in the States also are housed during their laying life.