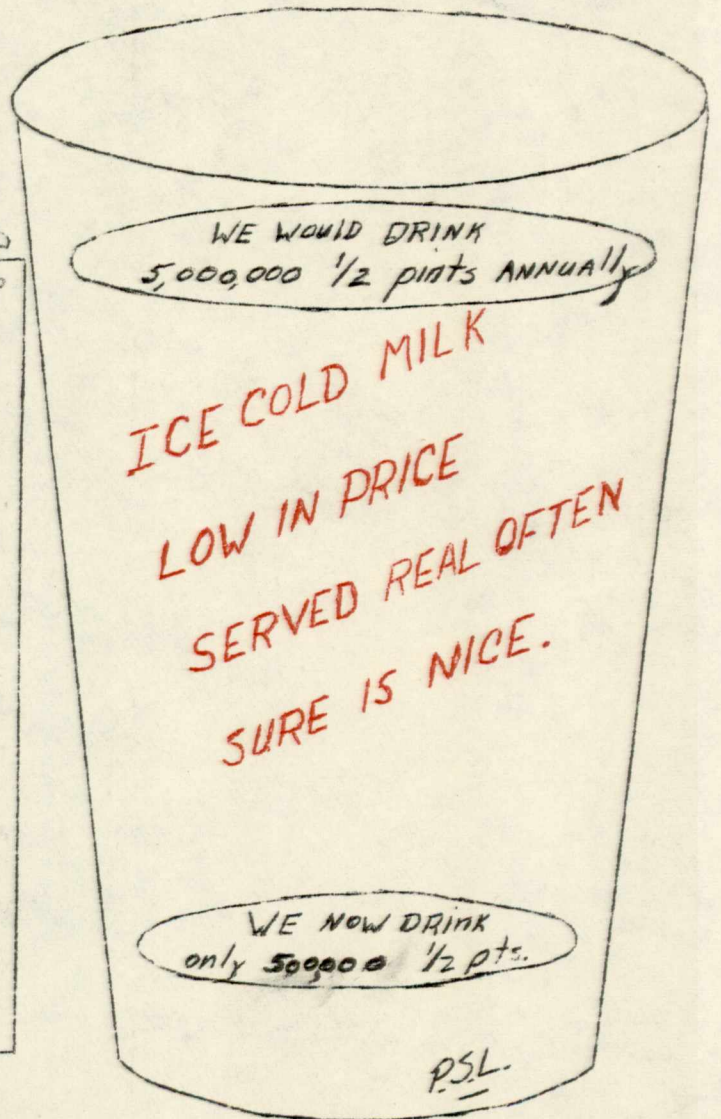
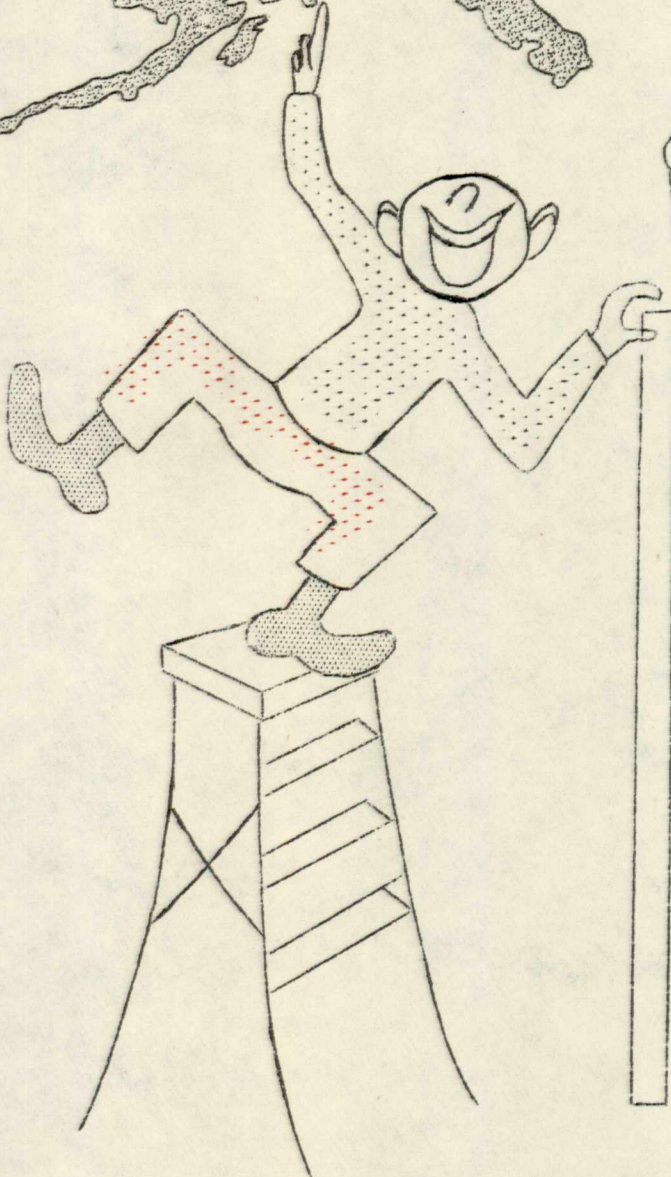
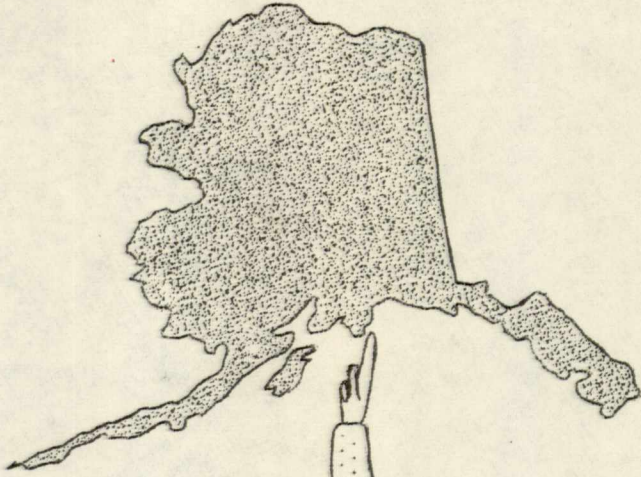


HEY!

WE
LIKE
MILK
TOO!



MILK SALES IN ALASKA'S SCHOOLS

*** RESPONSE TO *PRICE REDUCTION* AND *AVAILABILITY AT OTHER THAN LUNCH-TIME*

H. P. Gazaway and Charles Marsh

SUMMARY When offered more than once daily and at five cents a half-pint, Palmer school children consumed fresh milk at the rate of 1.1 half-pints per day, an increase of 138 percent over normal. Seward school children customarily eating lunch at school consumed 1.5 half-pints per day.

Sixty Alaskan schools--comprising 90 percent of the Territory's school enrollment--can be supplied with fresh milk. The market potential existing in these schools is estimated at 5,000,000 half-pints (2,500,000 pounds or 300,000 gallons) annually. This is 8 to 10 times the amount now consumed in Alaskan schools.

Increased consumption of fresh milk in Alaska's schools means stepping up imports from surplus producing Stateside milksheds. Alaska's dairy industry now supplies less than two-thirds of the Territory's fresh fluid milk.

Fresh milk consumption in the Territory of Alaska is lower than in any of the States. This is due to the high cost of milk and the problem of supplying milk. On the other hand, their climatic environment makes it important for Alaskans, particularly in the younger age groups, to drink fresh milk. The climate--especially the long, cold winter months with few hours of sunshine--requires greater consumption of nutritious foods.

Adequate diets are difficult and costly to maintain. The major reason is the high cost of transporting perishable items such as fresh milk. During winter children should have exceptionally stable diets. But the winter months also witness low supplies of fresh fruits and vegetables and therefore higher prices for these important foods.

Because of the cost, many Alaskan children have never tasted fresh milk. Only 23 of approximately 130 public schools in Alaska served school lunches in 1955-56. Of the 23 schools serving lunches, only 15 were serving milk. The 28,100 children in Alaska's public schools are estimated to have received less

than 600,000 half-pints of fresh milk at school during 1955-56. This means that each student drank one half-pint of fresh milk every nine days.

Alaska is still a deficit milk producing area even though milk production has increased about 20 percent annually during the past three years. Both fresh fluid and processed milk products are imported from the States. Fresh milk comes largely from Washington and amounts to more than one-third of all fresh milk now consumed. Any substantial rise in consumption per capita or increase in population will require increased use of milk products from the States.

PROCEDURE AND SCOPE This study was undertaken in an effort to assess the present milk consumption of Alaska's school children and to estimate the potential market in Alaska's school system. It was made possible by the wholehearted cooperation of the Seward Dairy and Seward Schools and by the Palmer school system and the Matanuska Valley Farmers Cooperating Association.

Palmer.--There are three schools in Palmer's Independent School District--Swanson grade school with an enrollment of 121, Central grade school with 458 students, and the High School with 175 students. Total enrollment is 754. Palmer is a rural town located in the center of Alaska's largest milkshed. Fresh milk has been served with Palmer's school lunch for a number of years.

The study was conducted in Palmer during March and April of 1956. Preparations for the study included two planning meetings with the school superintendent and the manager of the local dairy. One meeting with the school teachers and administrative staff was held about two weeks prior to the study. Two articles concerning the study were published in the community weekly paper.

From April 9 through 27 school lunches including milk were reduced in price from 35 to 30 cents. Extra milk at lunch was priced at 5 cent per half-pint as compared to the former price of 12 cents. During the three weeks in April, in Central school and the High School milk was served during the mid-afternoon break. At Swanson school milk was also offered both mid-morning and in the afternoon. No mid-morning or afternoon milk breaks had previously been held at any of the Palmer Schools.

Seward.--Both the high school (143 students) and the larger grade school (378 students) participated in this study; a smaller suburban school (121 students) did not participate. Milk had never before been served in any Seward schools.

In the course of this study, milk was served only during the lunch period. For this reason only 25 percent of their enrollment participated in the lunch program. The other students habitually went home for lunch. Preparation for this study consisted of two meetings with the school superintendent and the manager of the local dairy. A mimeographed explanation was also given to students and sent to parents.

To obtain opinions concerning the serving of milk to school children and suggestions on how to improve such a program, questionnaires (see Appendix I) were distributed to teachers, school administrators and lunch program administrators. Of the 44 questionnaires sent out, 27 were returned.

RESULTS More frequent offerings and lower prices increased milk consumption in the Palmer Schools by 138 percent. This was attributed both to better availability and lower price (see Table 1 and Figure 1). The increase was 184 percent in Swanson school, 128 percent in Central school and 130 percent in the High School. Palmer school children consumed 12,394 half-pints of fresh milk, but only 5,204 during the comparable "normal period". Milk consumption, other than one with each lunch, increased over eight fold from 928 servings in March to 7,994 servings at the lower price (see Figure 2). An even greater response was noted at Central school, where consumption went up twenty fold. Consumption per student per day was 1.1 half-pints compared to a previous figure of 0.46 half-pints.

TABLE 1.-Increase in milk purchases in Palmer schools in response to more frequent offering and lower price.

School	Student population Number	Total milk sales		INCREASE Percent	Daily consumption per student	
		Normal Half-pints	At 5¢		Normal Half-pints	At 5¢
High School.....	175	1,020	2,350	130	0.39	0.90
Central School....	458	3,294	7,519	128	0.48	1.09
Swanson School....	121	890	2,525	184	0.49	1.39
TOTAL.....	754	5,204	12,394	138	0.46	1.10

School	Sold with lunch		INCREASE Percent	Sold other than at lunch		INCREASE Percent
	Normal Half-pints	At 5¢		Normal Half-pints	At 5¢	
High School.....	856	884	3.3	164	1,466	794
Central School...	3,074	3,211	4.5	220	4,308	1,858
Swanson School...	346	305	-11.8*	544	2,220	308
TOTAL.....	4,276	4,400	2.9	928	7,994	761

* This decrease was attributed to more children returning home for lunch rather than ride the bus to Central school as the weather was pleasant during April at Palmer.

In the Seward schools total consumption in April was 2,898 half-pints or an average of 193 half-pints per day (see Table 2). Consumption per student eating lunch was 1.5 half-pints per day.

TABLE 2.-Total milk consumption by students eating lunch in two Seward schools.

School	Total sales	Average daily sales	Daily student consumption
	Half-pints	Half-pints	Half-pints
High.....	670	45	2.48
Grade.....	2,228	149	1.34
TOTAL.....	2,898	193	1.50

An analysis of the 27 questionnaires returned indicated that teachers think Alaska's school children need more milk to maintain good health. Twenty-one teachers expressed the opinion that a half-pint of fresh milk would be most beneficial, easiest to serve and most appealing of a number of items costing less than 10 cents. Three teachers chose an apple or an orange and two chose a serving of soda pop. One teacher thought that chocolate milk would be more appealing than plain milk.

Twenty-two teachers preferred an afternoon milk break while four teachers said a morning break would be more suitable. Thirteen teachers said that consumption would not be noticeably higher if milk was served both in the morning and afternoon. (This opinion was not borne out by the study since the Palmer Swanson school, where milk was served both morning and afternoon, consumed the most milk.) Six teachers agreed that two additional servings would increase consumption. Chocolate milk was not available to students, but 13 teachers thought it would increase consumption and 14 teachers thought there would be little or no change.

Opinions were given in regard to non-participation by students. The main reason given was that some children brought milk from home. This was pointed out by 13 teachers. Twelve agreed that some children had a personal distaste for fresh milk. Eleven thought that all children could not afford to buy milk.

CONCLUSIONS Alaska's school children will drink milk if it is available at a reasonable price. The results of this study show that milk consumption would definitely increase if:

- (1) Milk was available in all public and private schools.
- (2) Milk was served either mid-morning or mid-afternoon, or both, as well as during lunch.
- (3) The price of milk was lowered enough so more school children could afford it.

- (4) The milk program was supported by information explaining the purpose to children, teachers, administrators and parents.

It is estimated that annual consumption in Palmer schools would increase from 62,448 to 148,728 half-pints annually. This represents an increase from 83 to 197 half-pints per student.

Since only 25 percent of the students in the Seward schools were eating school lunches at the time the study was made, no annual estimate was figured.

Figure 3 shows the consumption of milk in Palmer schools converted to a 180 day school year. Projected estimates of the total consumption in the 15 schools now serving milk are shown in Figure 4, together with estimated consumption for 60 schools that could serve milk if the Special School Milk Program was placed in effect.

Three important conclusions may be made in the light of this study:

1. School children in Alaska will drink more milk if it is available and adequate time is allowed to drink the milk.
2. Effective pricing, made possible by the Special School Milk Program, will increase milk consumption in Alaska.
3. The program will divert fresh fluid milk from manufactured milk products and thus step up milk imports from the surplus milk producing areas of the Northwestern States.

The intent of the Special School Milk Program is to provide additional and beneficial means of support for dairy products by decreasing Stateside surplus milk supplies. If the program is extended to Alaska, it should increase consumption and therefore aid in decreasing the national surplus.

RECOMMENDATIONS The findings of this study provide a basis for the following suggestions which should be considered when the Special School Milk Program is extended to Alaska:

1. Substantial increases in milk sales can be expected if milk is made available and priced reasonably. It is quite possible that school boards will find that receipts from milk sales will increase even though prices are reduced.
2. Milk should be made available to schools and the program administered in such a manner as to require a minimum of participation and time on the part of teachers and school administrators. Many teachers are already overworked and think there is not adequate time for teaching. If the program is to be successful, teachers and administrators must cooperate willingly.
3. School children will drink a greater quantity of milk if there is a large price reduction. School officials can effect a greater increase in consumption by serving milk more often than by small reductions in price.
4. Additional milk drank at school in response to the factors emphasized by this study will be new consumption and will not replace the child's home consumption.

5. Milk should be made available to school children at as low a price as possible in order that more children may participate. In many instances community service organizations, clubs and churches will contribute money to school milk programs in order that children who cannot afford milk may still participate.

6. Milk should be available other than just at lunch time. Consideration should be given to either a morning or afternoon serving or both.

7. The Special School Milk Program will be successful only to the extent that parents, teachers and school administrators give their wholehearted support. This involves a great deal of promotional work and enthusiastic backing by everyone concerned.

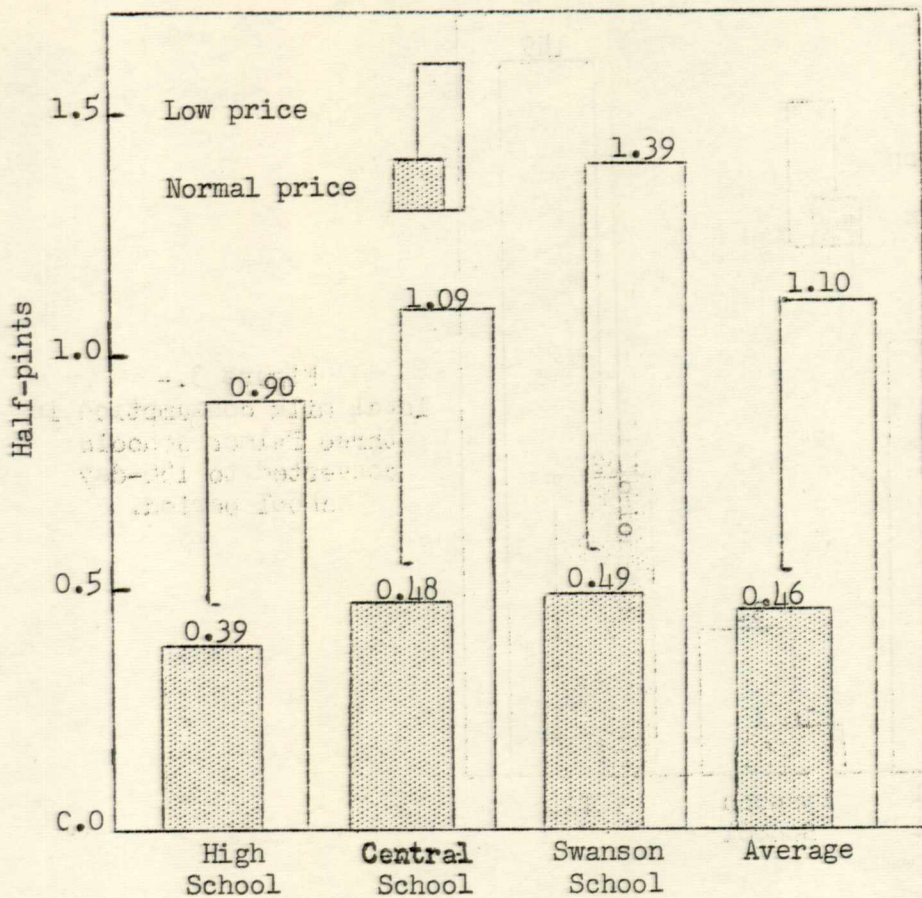
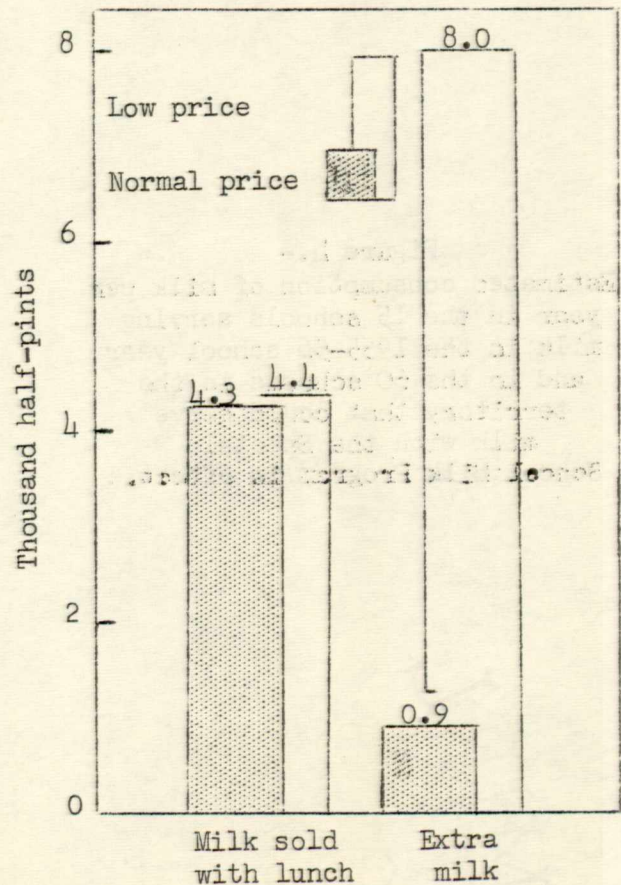


Figure 1.-
Milk consumed daily
per student in
three Palmer schools.

Figure 2.-
Comparison of milk sales
with lunches (half-pint per
lunch) in Palmer schools to
extra sales with lunches and
milk breaks.



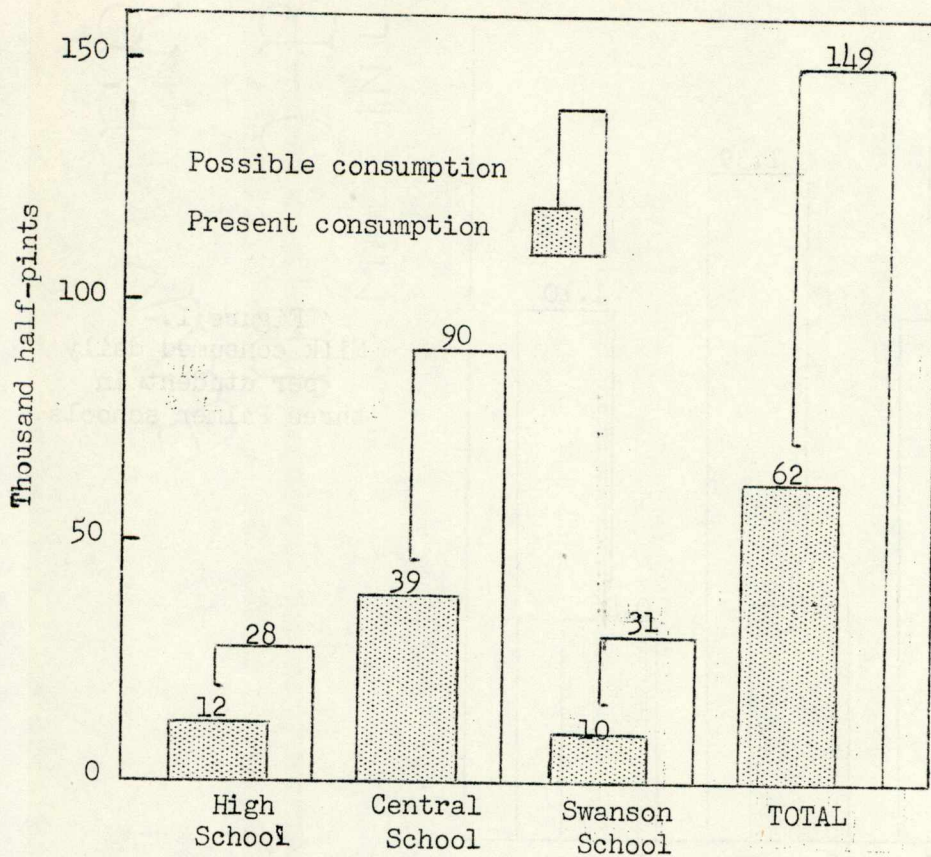
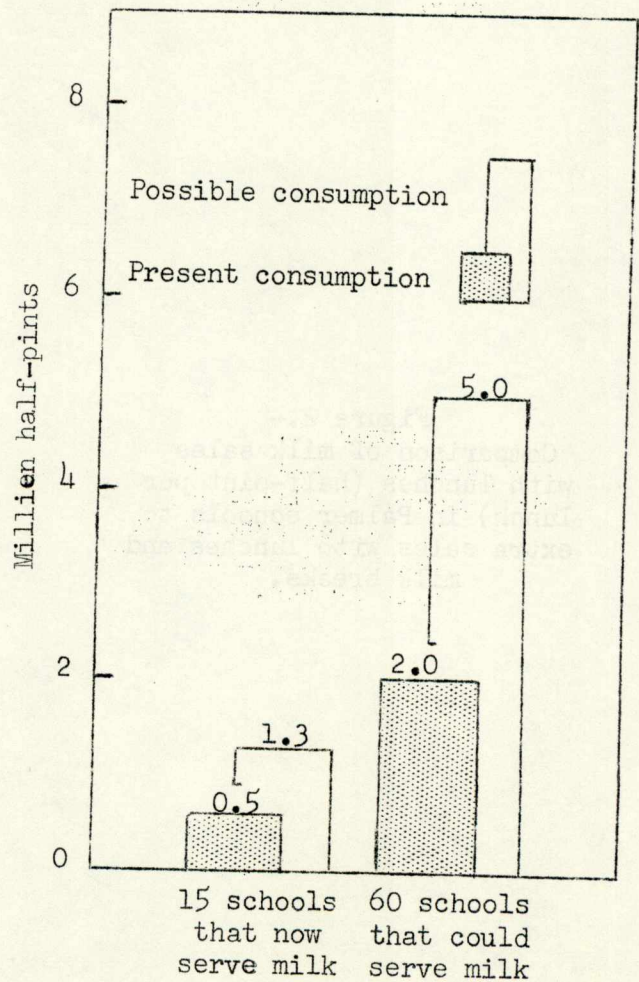


Figure 3.-
Total milk consumption in
three Palmer schools
converted to 180-day
school period.

Figure 4.-
Estimated consumption of milk per
year in the 15 schools serving
milk in the 1955-56 school year
and in the 60 schools in the
territory that could serve
milk with the Special
School Milk Program in effect.



Position or Grade _____

APPENDIX I

Mail to: School Office - or
Economics & Marketing
Alaska Experiment
Station - Palmer,
Alaska

School _____

HOW TO ENCOURAGE CHILDREN TO DRINK MORE FRESH MILK AT SCHOOL

1. In general, Alaskan school children should drink more milk for adequate diet and good health? Yes _____ No _____
2. Is there anytime of the year that this deficiency--if one exists--is more apparent - September, October, November, December, January, February, March, April, May?
3. What extra serving of food costing not more than 10¢ would be appealing, most beneficial and easy to serve to the greatest number of school children? pop, bowl cereal, half-pint fresh milk, several cookies, pie, chocolate beverage, hot cocoa, an apple, orange or small sandwich. (Circle one)
4. How much milk would you estimate your children would buy if it were served as frequently during the whole school year as it was during the study?

5. In addition to lunch, at which time would you get the highest student participation? Morning milk break _____ Afternoon milk break _____
Would consumption be noticeably higher if served both times? Yes _____ No _____
6. If both chocolate milk and "white" milk were available would children drink a greater quantity? Decrease _____ Increase _____ Little or no change _____
7. During the period of study was the milk always cold when served? Yes _____ No _____
If not, which servings? Morning _____ Lunch _____ Afternoon _____
If milk were always cold when served would it increase consumption? Yes _____ No _____
8. How would you account for the difference in consumption between Swanson, Central and High School? (Palmer Staff only)

9. What were the apparent differences between the students who purchase milk regularly when served and those who seldom purchased any? Circle answers.
 1. Personal distaste for milk
 2. Family cannot afford it
 3. Family not interested
 4. Brings milk from home
 5. Buys candy and pop
 6. Did not want to miss recess time
10. Any other comments (a) on this study (b) encouraging maximum participation in a similar year-round program.

