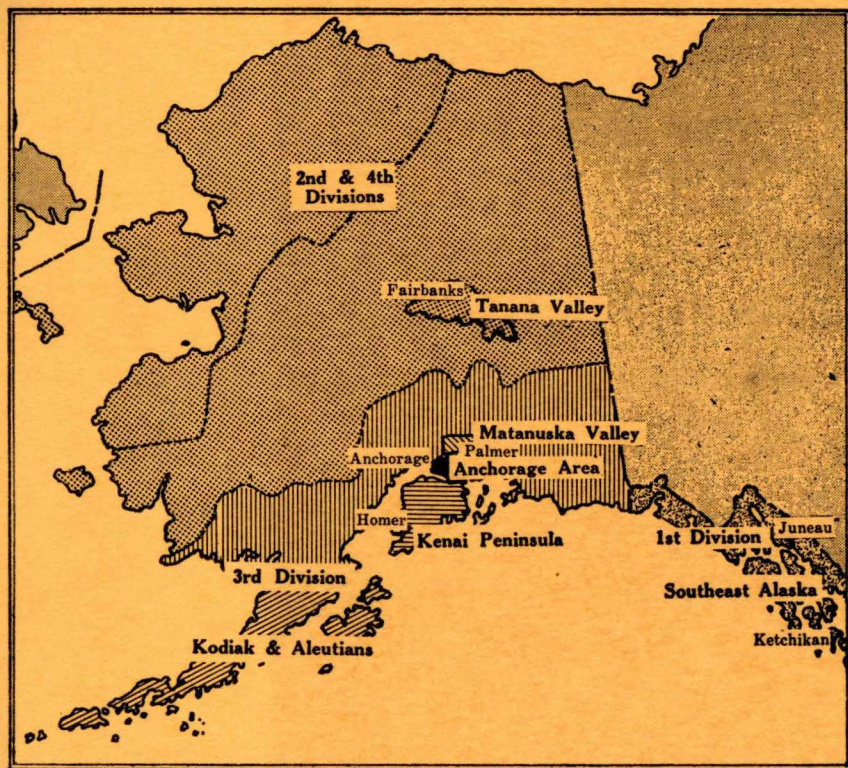


Statewide

Alaska

FARM FACTS

a compilation of agricultural statistics for the years 1953 through 1957



Location of Alaska's major farm regions, and their relation to judicial divisions of the census reports

University of Alaska
AGRICULTURAL EXPERIMENT STATION

joint research program with the

United States Department of Agriculture
AGRICULTURAL RESEARCH SERVICE

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Selected weather comparisons for Alaska's several agricultural regions, specially compiled by the U. S. Weather Bureau from 10 to 40 years of records.

Location	Temperature Precipitation				Characteristics of the growing season												
	extremes		Yearly Snow- average fall	Snow-	Season duration			Average temperatures		Average monthly precipitation*							
	Max.	Min.			Begins	Ends	Length	Max.	Min.	Apr	May	Jun	Jul	Aug	Sep	Oct	
	F°	F°	Inches		Date	Days	F°	F°	Inches								
Interior																	
Fairbanks -----	93	-66	11.9	60	5/21	8/29	101	67.8	40.0	-	0.32	1.37	1.92	2.10	-	-	-
College -----	99	-66	14.2	50	5/31	8/24	86	70.8	44.5	-	0.04	1.52	2.19	1.96	-	-	-
Tanana -----	92	-76	13.0	54	6/ 5	8/16	72	64.8	43.4	-	-	1.19	2.06	-	-	-	-
Nenana -----	98	-66	10.6	52	5/22	8/25	96	68.8	45.4	-	0.28	1.26	1.73	1.83	-	-	-
McGrath -----	88	-64	19.1	87	5/21	9/ 3	106	65.1	45.4	-	0.48	2.06	2.32	3.63	0.28	-	-
Fort Yukon -----	100	-75	6.5	45	5/30	8/20	83	69.8	47.8	-	0.03	0.70	0.84	0.74	-	-	-
Gulkana -----	91	-65	11.4	29	6/ 3	8/16	75	67.3	43.6	-	-	1.07	1.97	0.98	-	-	-
Cook Inlet																	
Anchorage -----	86	-38	14.3	60	5/ 2	8/21	112	61.8	44.2	-	0.53	0.89	1.55	1.63	-	-	-
Matanuska -----	91	-41	15.4	47	5/26	9/ 9	106	65.3	45.0	-	0.19	1.33	1.97	2.94	0.73	-	-
Palmer -----	90	-38	15.9	64	5/13	9/17	128	71.5	43.1	-	0.42	1.53	2.32	3.08	1.47	-	-
Talkeetna -----	91	-48	28.9	112	6/ 9	8/22	75	67.7	44.0	-	-	1.24	2.26	2.48	-	-	-
Skwentna -----	90	-50	32.3	118	5/30	9/ 1	94	67.2	44.7	-	0.09	1.71	3.01	3.99	0.15	-	-
Kenai -----	89	-48	19.6	64	6/11	9/ 6	88	60.0	45.6	-	-	0.93	2.20	3.11	0.62	-	-
Homer -----	80	-18	24.7	48	5/31	9/14	107	59.0	42.8	-	0.04	1.17	1.64	2.89	1.27	-	-
Kodiak Island -----	86	-5	58.8	60	4/29	10/ 9	164	54.5	44.4	0.29	5.65	4.03	3.91	3.81	6.08	2.08	-
Bristol Bay																	
King Salmon -----	88	-40	22.5	43	5/27	9/16	113	60.7	44.6	-	0.23	1.64	2.82	4.01	1.92	-	-
Iliamna -----	91	-47	25.4	64	5/23	9/17	118	60.2	44.1	-	0.36	1.37	2.67	4.97	2.27	-	-
Southeastern																	
Haines -----	90	-16	60.7	139	5/11	10/ 1	144	62.4	46.1	-	1.38	1.43	1.85	2.68	6.38	0.30	-
Juneau -----	87	-10	90.3	102	4/25	10/18	177	59.9	45.6	1.28	5.14	4.13	6.04	7.37	10.49	8.70	-
Ketchikan -----	96	- 8	151.9	33	5/ 2	10/18	170	60.5	47.0	-	8.10	7.34	8.07	9.90	14.69	11.22	-
Wrangell -----	92	-10	82.9	62	4/27	10/ 8	165	59.9	45.8	0.64	4.13	4.17	5.30	6.20	8.55	2.88	-

*Amounts for terminal months include rainfall realized within the growing season portion.

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Many persons have helped prepare this publication. First of all, thanks are due the farmers of the state who patiently answered many questions and filled out many forms. James Wilson, director of Alaska's Division of Agriculture, and his staff were equal partners in preparing the five original annual reports from which most of the information was drawn. The Matanuska Valley Farmers Cooperating Association contributed material on prices paid and received. General Frank E. Armstrong of the Alaska Command and his staff, especially Leonard Jones and Mrs. William Mallory of the Purchasing and Contracting Office, gave much help and encouragement. The old Alaska Resource Development Board, the Soil Conservation Service, the Alaska Railroad, merchants and food price enumerators in several cities were also unstinting in their assistance.

FOREWORD

Reliable and current agricultural statistics are essential for charting trends and progress. Historical and current data are useful for guiding individual enterprises and for adjusting public programs relating to production, processing and marketing. Agriculture and other industries in Alaska are handicapped by not having more reliable statistical series.

Before 1950 agricultural statistics were sporadically collected to meet specific needs. The Matanuska Valley Farmers Cooperating Association and other marketing firms provided information on quantities sold and prices. Both the Alaska Department of Agriculture and the Agricultural Experiment Station independently provided estimates of acreages, production and farm sales for 1951 and 1952.

In 1953 these two agencies pooled their efforts in collecting and distributing agricultural statistics for the Territory. Farmers in the Tanana Valley, the Kenai Peninsula, the Anchorage area and the Matanuska Valley were personally interviewed. All known producers in these areas with as much as \$100 in farm sales were interviewed. Growers in other areas were questioned by mail. Involved were about 400 enterprises. This information, together with supplementary data from marketing firms and the local military quartermaster, gave a production estimate for 1953.

A similar procedure was used during the next five years, with most information being collected by mail rather than by farm visits. Some 500 to 800 individuals were sent a questionnaire in December of each year. From 35 to 40 per cent replied. Telephone and follow-up interviews with farmers, processors, and other agencies including the military services, provided supplementary data. As more information became available, discrepancies in prior estimates were revised.

This publication brings together agricultural statistics for the five years of 1953 through 1957, and compares them with the 1950 Census of Agriculture. Information on population, retail food prices, transportation charges, military purchases, and farm prices is included. This compilation provides a fairly complete picture of the size, and certain changes and trends in Alaska's food producing industry. It may suggest adjustments needed to meet changing times, and will serve as a basis of comparison for future years.—Allan H. Mick, Director.

Compiled by John R. Parks and edited by
H. P. Gazaway, economists, Alaska Agricultural
Experiment Station. Final editing by
Allan H. Mick, Director

ALASKA FARM FACTS

It has long been recognized that livestock and certain cool season crops can be grown in favorable sites throughout most of Alaska. Family gardens and greenhouse vegetables have been raised since the gold-rush days—at Fort Yukon, Eagle, Circle, Unalakleet and some points beyond the Arctic Circle. Potatoes have been grown, mostly for home use, by both native and white families throughout Alaska at low altitudes below 67° latitude. Commercial farming has largely come into being since World War II. Most farming is near the major urban markets of Anchorage and Fairbanks.

Perhaps the first commercial farming in Alaska was the growing of hay and grain to feed horses used in freighting and mining. Cereals and forages were grown for a number of years at favorable sites on the Yukon north of Fairbanks.

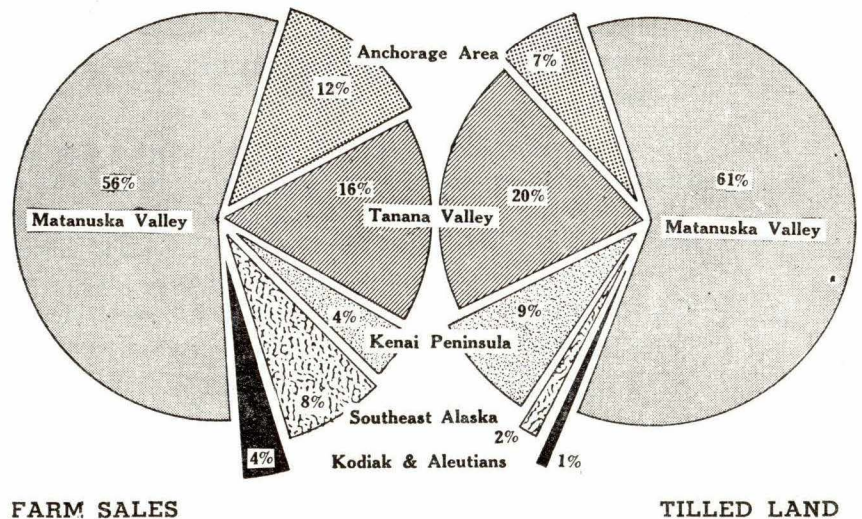
Livestock and milk production is not new. Cattle were introduced by the Russians. They had fresh milk at their missions on the Pribilof Islands, at Holy Cross, and at other now remote points. Later cattle importations were trailed inland from seaports to the gold fields to feed on summer grasses before slaughter. Wool has been grown on the Aleutians for many years. Between 1892 and 1902 reindeer were introduced from Siberia to provide a reliable meat supply for Eskimo people.

Rapid growth of commercial farming has occurred only since the last war. This is seen in accelerated homesteading, more acres of cleared and cultivated land, and in larger farm sales. A greater part of the development in the Mat-

anuska Valley stems from the government colony established during the mid-1930's

The past decade has also witnessed considerable interest and development in the Tanana Valley around Fairbanks, the Kenai Peninsula south of Anchorage, on Kodiak and the Aleutian Islands, and in reindeer herding along the western coast. While fur farming has declined since the early 1930's it now appears more promising.

Expansion is held back more by man-made obstacles and attitudes than by the natural environment. Adverse factors include the limited size of accessible markets, high farm and marketing costs, large capital and managerial requirements of efficient farms and marketing firms, and small land holdings limited to 160 acres by homestead regulations. Adverse military procure-



Relative importance of Alaska's agricultural regions in 1957, in terms of total value of farm sales, left, and of total cultivated land, right.

ment policies have proved an insurmountable obstacle to the full realization of a stable agricultural economy.

Continued growth of agriculture in Alaska depends on population and economic growth, and on how well local farm products can compete with imports in price, quality, and variety.

Table 1.—Value of 1957 Alaska farm sales of various commodities by agricultural areas.

Commodity	Southeast Alaska	Tanana Valley	Mat. Valley	Anch. Area	Kenai Pen.	Kodiak & Aleut.	TOTAL
	1,000 dollars						
Milk	131.0	144.0	1,258.0	52.0	22.0	13.0	1,620.0
Eggs	74.3	36.8	65.9	88.8	68.2	0.5	334.5
Poultry meat	2.8	0.8	1.9	5.0	4.6	0.2	15.3
Beef	8.2	9.2	24.4	13.2	8.3	48.0	111.3
Pork	*	4.8	1.0	48.1	0.8	1.3	56.0
Mutton	*	0.1	*	*	0.2	3.5	3.7
Wool	*	*	0.0	0.0	*	58.6	58.6
Fur	50.0	0.0	0.0	0.0	0.0	*	50.0
Potatoes, U. S. No. 1	3.3	297.5	346.2	138.3	22.7	*	808.1
Other	0.2	10.0	12.4	8.8	2.2	*	33.6
Lettuce	1.5	7.4	61.4	9.7	1.5	*	81.6
Carrots	1.6	2.5	37.8	2.1	1.6	*	45.6
Cabbage	1.5	14.0	16.1	11.3	1.6	*	44.5
Celery	0.3	0.9	10.0	0.2	.4	*	11.8
Other vegetables**	5.5	13.2	18.8	23.0	4.5	*	65.0
TOTAL SALES	280.2	541.2	1,853.9	400.5	138.6	125.1	3,339.6

*Information not available.

**Includes radishes, cauliflower, green onions, beets, broccoli, rutabagas, turnips, rhubarb, greenhouse, bedding and nursery crops, Greenhouse sales in 1957 were estimated at \$22,000.

Military services will probably continue as an important although not profitable outlet. Farmers in other states will continue to enjoy a comparative cost advantage. Transportation charges do not necessarily function as a protective tariff since all machinery, all equipment and some supplies needed by Alaska's farms must be shipped in. Although imported foods for civilian consumption are subject to charges, military foodstuffs have been exempt so that Alaska's agriculture has perhaps been handicapped rather than helped by shipping costs.

Because of high transportation costs exports of farm commodities to other states or Canada in any significant quantity has not been feasible. Small quantities of special products such as native plants, berries, seeds, furs, and reindeer meat have been exported. Exports of wool may increase if price supports remain at present levels.

Alaska has five fairly distinct and well recognized agricultural regions. These are Southeast Alaska (included in the 1st Judicial Division); the Kenai Peninsula, Anchorage area and Matanuska Valley (all in the 3rd Division); the

Tanana Valley area (4th Division); and Kodiak, the Aleutian Islands (parts of 3rd and 2nd Divisions). Although judicial divisions no longer exist as civic entities they are still significant because Alaska's agricultural census was organized and reported by these divisions. Agency estimates have usually been reported by agricultural areas which roughly coincide with judicial divisions, both defined by natural boundaries.

Alaska's land area is about 365 million acres or 571,000 square miles excluding inland waters. How many acres are suited for food and fiber production is a debatable matter. Most estimates of cultivatable acreage range from 1 to 5 per cent of the total land area. Less than 2 million acres in the most favorable environments have so far been surveyed. Of this nearly 40 percent is deemed cultivatable. The remainder is not tillable, although some can contribute to Alaska's animal feedbase as pasture and roughage land. It also serves as wildlife habitat, watershed control and as woodland.

Estimates of grazing land usually exceed 5 million acres, excluding extensive range lands

which may be utilized by reindeer and muskox.

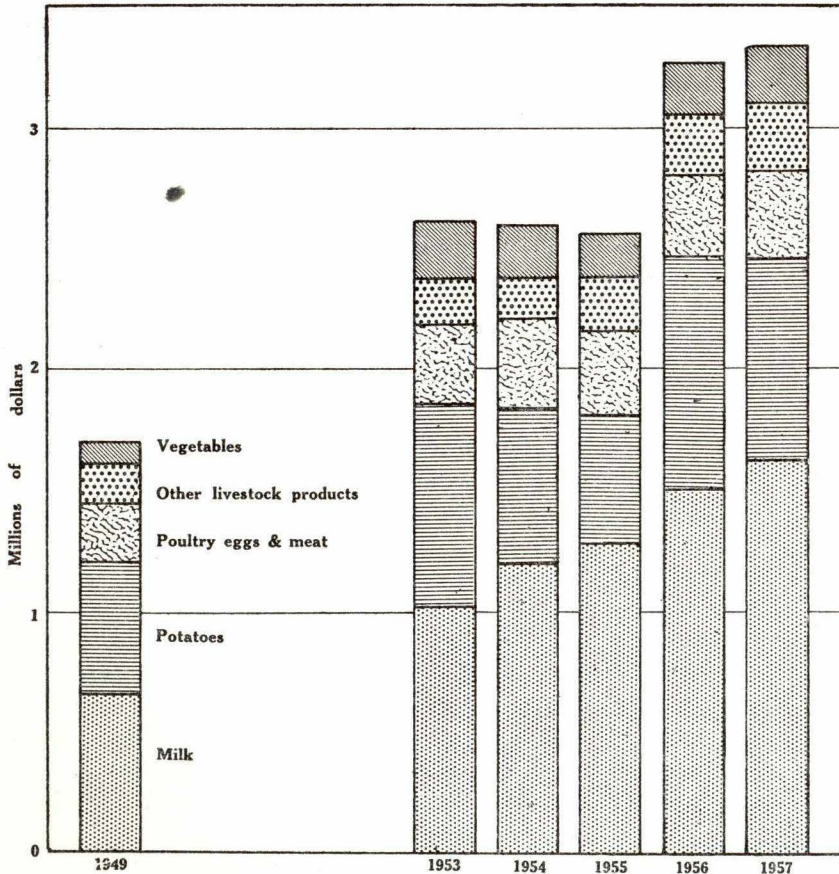
Over 99 per cent of Alaska's total land area is still federally controlled. By 1957 less than 500,000 acres had passed into private, city and state ownership. Alaska will receive 104 million acres during the next 25 years. Most Alaskans expect state lands will be rather rapidly distributed to private ownership.

The number of private landholdings in Alaska is unknown. A January 1, 1958, estimate of farm holdings includes 150 to 175 full-time farms and 300 to 400 part-time farms. In addition there were some 2,000 to 2,500 rural homesteads and a larger but undetermined number of rural residents who do not intend to farm but who grow some food for home use. Alaska's 1950 population included some 35,000 natives (Indians, Eskimos and Aleuts), many living in rural areas and depending on hunting, fishing, gardening, trapping,

reindeer herding, and the sale of arts and crafts.

Most potential farm land is covered with timber or brush. Clearing and initial cultivation is expensive, the cost varying widely with density of timber stands and equipment used. Clearing and root picking 100 acres of cropland may require an investment ranging from \$6,000 in burned-over country to \$50,000 in the heavy timber of southeastern Alaska.

Land actually planted during the years 1953 to 1957 usually accounted for only 70 per cent of the total cleared acreage. Much cleared land was not cropped because it was originally cleared by homesteaders to "prove-up". On many homesteads no real effort was made to use cleared land after the owner had received his patent. On many farms as much as 20 per cent of the so-called cleared land was still covered with stump rows and debris.



Growth in value of Alaska's farm sales, by commodities, 1949 to 1957

FORAGE CROPS are chiefly oat-pea mixtures and brome-grass. Red clover and timothy are in demand.

Oats and peas are now preserved as silage although some was formerly put up as hay. While it makes good silage, hay is usually inferior.

Perennial brome-grass has supplanted some annual oat-pea forage since 1950. Smooth brome-grass is drought resistant and winter-hardy, providing a winter cover for fields exposed to wind erosion, as in the Matanuska Valley. Properly managed, it produces good yields of high quality hay, silage or pasture. First cuttings are usually cured for hay while second cuttings are ensiled.

During the winter of

1956-57, nearly 2,000 acres of grass winter-killed as a result of January thaws followed by freezing rains. Although funds were distributed through the Agricultural Conservation Program to encourage reseeding, many farmers were forced to plant oats-and-peas as an emergency measure which gave a large oat-pea crop harvest in 1957.

Grass seedings have steadily increased. In 1949, only 510 acres were harvested. By 1957 over 3,000 acres were cut. Acres in oat-pea forage also went up from about 3,500 in 1949 to 6,600 in 1957.

Dairy farmers have preserved more and more roughage as silage. Silage production more than doubled between 1953 and 1957 while hay harvests remained nearly constant. By 1957, over 75 percent of all harvested roughage was preserved in the form of silage. Some hay was mechanically dried.

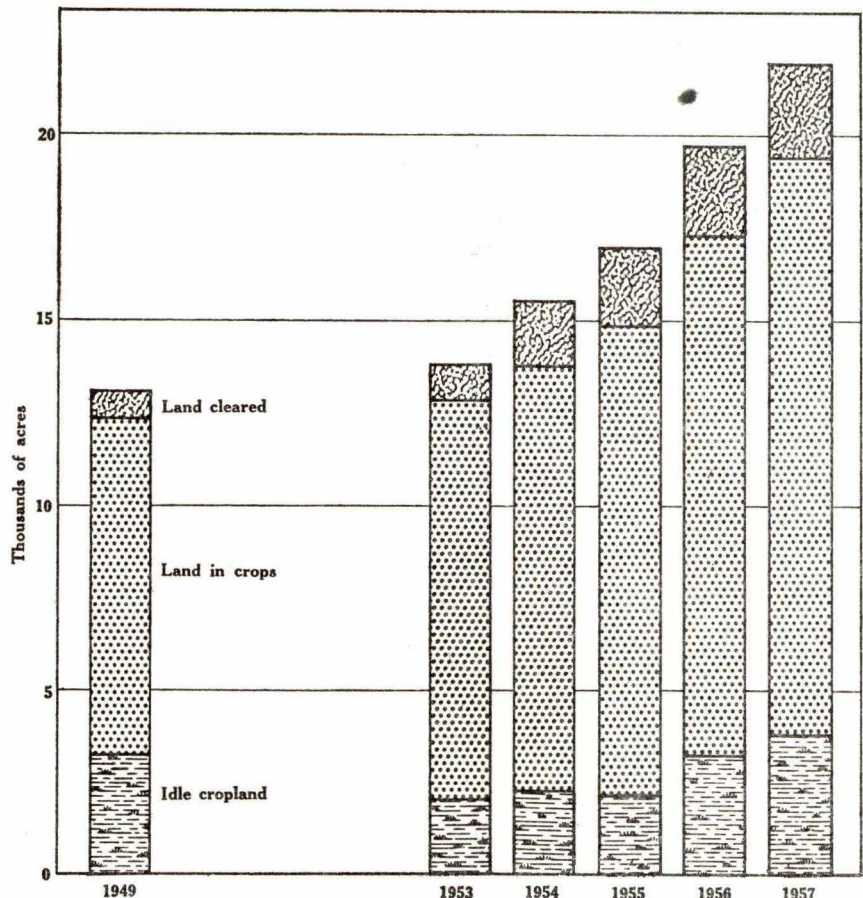
GRAIN plantings, largely for dairy feed, seed and straw have increased. Barley seedings went up sharply from 55 acres in 1949 to 1,149 acres in 1957. Oat grain was harvested from 976 acres in 1957, compared to 333 in 1949. The popularity of barley is attributed to an improved variety, Edda, introduced in 1952. It gives good yields of feed grain, for which there is a market.

A marked increase in commercial grain growing occurred in 1957 when the Matanuska Valley Farmers' Cooperating Association constructed the first commercial grain dryer and elevator in Alaska. Local mixed feeds became available in 1957.

The value of oats and barley harvested in 1957 was estimated at \$140,665. Much less than normal soil moisture at planting time reduced yields of both grains which ranged from 35 to 40 bushels per acre. Wet conditions during harvest caused considerable lodging and shattering, as much as 20 per cent being lost from some fields in the Matanuska Valley.

Two adapted wheat varieties—Gasser and Khogot—are available in Alaska. Gasser was released in 1954 and is recommended to replace Khogot, a variety introduced from Siberia. They are grown mainly for livestock feeds, both having rather poor milling qualities. Only small, scattered acreages were planted in the Matanuska and Tanana Valleys.

Future prospects of Alaska's grain industry may be bright if more investment capital and



Growth in utilization of Alaska's land for producing food. "Land cleared" refers to the number of acres from which timber was removed, some of which may have been planted.

better than average management become available for growing, processing, and distribution. Efficient grain production, an extensive type of agricultural enterprise, requires large investments in land and machinery. Improved practices in fertilizing, irrigating, drying, storing, milling and handling must be adopted. A stronger strawed barley is needed.

MILK sales continue as the major source of farm income in Alaska. Total production went up 144 per cent between 1949 and 1957. Quantity of milk sold increased from 9.5 to 14.9 million pounds between 1953 and 1957, as compared to 6.6 during 1949. Cow numbers went up from 899 to 1,215.

Fresh milk sales improved in both dollar volume and relative importance. About 96 per cent of the total 1957 production was sold, compared to 92 in 1949. This is because herds became larger, less milk was used for calf-feeding and fewer rural families maintained a "family cow".

Sales of Grade A milk accounted for a greater part of total Alaska farm sales in 1957 than in 1949. In 1949 milk receipts were approximately 40 per cent of the total, compared to 48 per cent in 1957. Most milk sold for other than fresh-fluid use was either temporary seasonal surplus or from new dairies that had not yet met grade A requirements. Ice cream and recombined milk were made largely

Table 2.—Value of Alaskan farm crops sold and used at home during the years 1953 through 1957, compared with 1949.

Commodity	1949	1953	1954	1955	1956	1957
1,000 dollars						
VALUE OF FARM CROPS SOLD						
Milk -----	664.0	1,016.0	1,204.0	1,290.0	1,509.0	1,620.0
Eggs -----	160.3	273.8	306.3	292.4	315.3	334.5
Poultry meat ----	71.0	58.9	52.9	55.0	19.7	15.3
Beef -----	40.4	70.7	56.4	82.7	93.6	111.3
Pork -----	46.0	27.4	29.9	37.7	35.8	56.0
Mutton -----	4.0	3.6	1.2	1.2	1.4	3.7
Wool -----	28.3	38.5	30.0	43.8	45.9	58.6
Fur -----	39.7	57.5	37.0	56.5	70.0	50.0
Potatoes, U.S. 1's	516.9	820.2	613.0	494.3	894.4	808.1
Other ..	28.5	15.6	22.1	26.1	63.4	33.6
Lettuce -----	43.8	73.2	60.2	53.8	81.5	81.6
Carrots -----	28.3	53.2	35.0	43.4	34.3	45.6
Cabbage -----	17.2	44.6	41.0	22.6	33.5	44.5
Celery -----	9.6	14.9	12.5	9.7	13.5	11.8
Other vegetables*	*	49.3	57.1	42.0	46.2	65.0
TOTAL SALES --	1,638.0	2,617.4	2,558.6	2,551.2	3,257.5	3,339.6
VALUE OF FARM CROPS USED AT HOME						
Milk -----	60.0	71.0	83.0	84.0	75.0	68.0
Eggs -----	16.7	27.0	30.0	30.5	32.0	31.5
Poultry meat ----	6.4	13.9	13.1	11.9	12.9	8.2
Beef -----	9.9	22.1	28.5	44.5	17.1	20.1
Pork -----	9.1	9.2	7.2	4.1	3.3	4.2
Mutton -----	1.4	1.3	2.0	4.2	3.8	2.5
Oats grain -----	19.7	39.8	62.0	43.3	58.7	65.3
Barley grain ----	1.0	16.5	18.2	27.6	56.3	75.4
Oat-pea hay -----	202.5	131.5	126.0	118.9	135.6	173.6
Oat-pea silage ---	105.6	177.2	167.9	233.9	320.2	366.6
Seeded grass hay ..	39.5	144.1	*	214.5	197.2	203.9
Seeded grass silage	*	13.3	*	33.7	69.4	39.2
TOTAL HOME USE	471.8	666.9	537.9	851.1	981.5	†1,058.5

*Information not available.

**Includes radishes, cauliflower, green onions, beets, broccoli, rutabagas, turnips, rhubarb. Greenhouse and nursery crop sales in 1957 were estimated at \$22,200.

†In addition to the 1957 home use listed in the table, it was estimated that rural residents and farmers used \$49,500 worth of vegetables (excluding potatoes); \$4,000 worth of grains other than oats and barley; \$58,600 worth of native grass hay, and \$11,600 worth of native grass preserved as silage.

from imported ingredients.

The Matanuska Valley, 50 miles northeast of Anchorage, produced most of Alaska's milk. Its lead continued to increase even though expan-

Table 3.—1949 farm acres planted, production and value, from the decennial census, revised by the Alaska Agricultural Experiment Station.

JUDICIAL DIVISION					
Item	Unit	1st	2nd & 4th	3rd	TOTAL
Farms	number	68	86	371	525
Total land area	1,000 acres	22,010	252,572	90,900	365,482
Land in farms	acres	4,149	16,477	401,173	421,799
Average farm size	acres	61	192	1,081	803
Land in crops	acres	588	1,370	7,188	9,146
Idle land	acres	297	881	2,061	3,239
Total cropland	acres	885	2,251	9,249	12,385
Land cleared since 1945	acres	57	876	1,704	2,637

FEED & FORAGE CROPS

Oats	acres	*	35	298	333
	bushels	*	1,200	10,416	11,616
Barley	acres	5	3	47	55
	bushels	100	117	444	661
Wheat	acres	3	9	192	204
	bushels	36	164	5,063	5,263
Mixed grains	acres	*	1	162	163
	bushels	*	20	4,006	4,026
Mixed grain hay	acres	46	189	2,267	2,502
	tons	61	273	3,343	3,677
Mixed grain silage	acres	*	321	672	993
	tons	*	1,487	3,336	4,823
Seeded grass hay	acres	221	66	223	510
	tons	330	86	360	776
Wild grass hay	acres	35	2	156	193
	tons	20	2	210	232

POTATOES & TRUCK CROPS SOLD

Potatoes, U.S. No. 1	acres	7	196	827	1,030
	tons	18	1,775	3,753	5,546
	dollars	1,800	159,750	355,340	516,890
Potatoes, other	tons	5	147	458	610
	dollars	250	6,615	21,678	28,543
Lettuce	acres	1	5	35	41
	tons	3	20	160	183
	dollars	660	4,900	38,240	43,800
Carrots	acres	2	9	22	33
	tons	5	20	164	189
	dollars	1,000	4,900	22,360	28,260
Cabbage	acres	1	4	31	36
	tons	3	20	109	132
	dollars	420	2,700	14,052	17,172
Celery	acres	*	3	3	6
	tons	2	9	26	37
	dollars	625	2,700	6,300	9,625
Other vegetables	acres	3	28	33	64

sion had slowed. Production went up only 4 per cent in 1957 compared to 25 in 1954, 12 in 1955 and 24 per cent in 1956. This area produced 77 per cent of Alaska's fresh milk in 1957 and 64 per cent in 1953. Matanuska Valley production and sales nearly doubled between 1953 and 1957. Farm sales increased from 6.4 million pounds (\$650,000) during 1953 to 11.9 million pounds (\$1,258,000) in 1957. This represents a 93 per cent gain in farm sales.

Prices Matanuska dairymen received for their milk were relatively stable, only a 20 cent a hundredweight increase being realized in five years. In 1949 the average price received was about \$9.75 a hundredweight compared to \$10.85 during the five years. Prices for fluid sales varied from \$10.50 to \$11.00, while seasonal surplus or grade B production brought \$5.50 to \$6.50 a hundredweight. These prices do not include deferred patronage refunds to those producers who were members of the farmer's cooperative. These refunds equalled from \$1.20 to \$2.25 per hundred for each of the five years. Prices were based on a 4 per cent test with 10c differential for each 0.1 per cent increase or decrease in fat. Adjustments were imposed for seasonality of

ANIMALS ON FARMS

Horses, mules, ponies	number	18	12	177	207
Cows & heifers	number	321	130	873	1,324
Yearling heifers	number	55	26	350	431
Calves	number	25	17	246	288
Yearling steers, bulls	number	42	5	146	193

LIVESTOCK PRODUCTS RAISED & SOLD

Milk produced	1,000 pounds	1,240	546	5,358	7,144
	1,000 dollars	119	71	534	724
Milk sold	1,000 pounds	1,212	531	4,808	6,551
	1,000 dollars	117	68	479	664
Beef raised	pounds	19,800	7,100	194,700	221,600
	dollars	4,500	1,700	44,100	50,300
Beef sold	pounds	17,800	5,100	152,700	175,600
	dollars	4,100	1,300	35,000	40,400
Chickens over 4 months	number	3,378	2,168	14,732	20,278
Eggs produced	dozens	37,600	10,800	150,700	199,100
	dollars	32,700	10,600	133,700	177,000
Eggs sold	dozens	37,000	9,200	134,000	180,200
	dollars	32,100	9,200	119,000	160,300
Poultry meat raised	pounds	29,700	12,800	226,900	269,400
	dollars	9,200	3,800	64,200	77,200
Poultry meat sold	pounds	29,200	10,800	213,500	253,500
	dollars	9,100	3,200	58,700	71,000
Hogs & pigs	number	*	347	854	1,201
Pork raised	pounds	*	14,200	98,200	112,400
	dollars	*	9,100	46,000	55,100
Pork sold	pounds	*	11,900	86,500	98,400
	dollars	*	7,700	38,300	46,000
Sheep	number	*	20	6,026	6,046
Mutton raised	pounds	*	400	10,780	11,180
	dollars	*	180	5,260	5,440
Mutton sold	pounds	*	150	8,060	8,210
	dollars	*	70	3,930	4,000
Wool sold	pounds	*	225	56,791	57,016
	dollars	*	112	28,200	28,312
Ranch fur animals	number	4,264	130	383	4,777
Fur animals & pelts sold	dollars	38,584	—	1,121	39,705

*Information not available.

production in an effort to reduce summer peaks and raise autumn lows.

About two-thirds of the Matanuska Valley milk was processed and marketed by the Matanuska Valley Farmers Cooperating Association, the remainder being sold by non-members to a privately owned plant in Anchorage. Both of these plants distributed to independent retail routes and to stores. No locally produced fresh

milk was consumed in military messes, although a small quantity was sold by military commissaries.

Only seasonal surplus or grade B milk was used for manufactured products, chiefly ice cream and cottage cheese. No hard cheese or butter was manufactured from Alaska's fresh milk. Military troops in Alaska consumed recombined or reconstituted milk, made from imported solids and dehydrated butterfat. The quantity of recombined bought by the armed forces—some 12 to 15 million pounds annually—exceeded the total volume of fresh milk produced in the local milkshed.

Although the military market for troop messes exceeded the civilian market in size, no fresh milk was sold for this purpose because it was more expensive than recombined milk made from imported powder and butterfat. During most of the five year period the Matanuska Valley Farmers Cooperating Association supplied recombined milk for troop messes

on an annual contract basis. This was manufactured in their Palmer and Fairbanks plants. A portion of the patronage refunds was derived from this source rather than from fresh milk sales.*

*While recombining of milk for military use enlarged the volume of manufactured products moving through Alaska's dairy processing industry and thus perhaps reduced unit manufacturing costs, this practice contributed little to develop-

Despite the base-surplus method of pricing large summer production imposed severe marketing problems. So did a period of short supply starting in late August, and extending through October. Although seasonal surpluses sometimes ran as high as 20 per cent for short periods they

never averaged more than 10 per cent a year. Development of seasonal markets in areas other than Anchorage helped use Matanuska Valley's peak production. During 1954, for example, the Matanuska Valley Farmers Cooperating Association opened a Fairbanks branch plant to

ing a stable food industry within Alaska. Imported ingredients came from milksheds in the states, much of it from Class C farms with low indebtedness and benefiting indirectly from so-called national subsidy programs not effective in Alaska. For this reason local military procurement policy justified by short-range economics contradicted long-range military objectives of encouraging Alaska's internal economy.

While representations by high-ranking military officials before Congressional committees held that Alaska's weak economy and dependence on long overseas supply lines were a hindrance to the nation's welfare, no recognition of this benevolent attitude was apparent in local procurement in Alaska. In particular, annual competitive bids procedures required in milk procurement encouraged over-capitalization of Alaska's manufacturing industry, imposing an additional burden of indebtedness on individual dairy enterprises. In an effort to win contracts which might help amortize these investments, unrealistically low prices were forced on Alaska's dairy industry.

At the same time, use of imported ingredients denied any opportunity to an estimated 70 or 80 local dairy enterprises that might have been supported by military markets.

A similar paradox was seen in commissary markets where Alaska's fresh milk at 33c a quart returned to the dairyman (with a typical capitalization of nearly \$60,000) an hourly wage of perhaps \$1.50. Yet, due to the vagaries of military policies, this milk was forced to compete with imported fresh milk priced at 22 and 23c a quart. As a result, not much local milk moved through commissaries. This denied development opportunities to perhaps 12 or 15 other potential local dairy enterprises.

Table 4.—Land cropped, idle, and cleared by years for the major agricultural areas of Alaska. All figures are acres.

Item	1949	1953	1954	1955	1956	1957
Acres						
SOUTHEAST ALASKA						
Cropped	588	200	242	280	298	283
Idle	297	100	53	35	35	50
Total	885	300	300	315	333	333
Cleared	*	10	15	18	90	15
TANANA VALLEY						
Cropped	1,370	1,547	1,564	1,825	2,289	2,610
Idle	881	434	567	850	686	921
Total	2,251	1,981	2,131	2,675	2,975	3,531
Cleared	*	150	544	300	556	903
MATANUSKA VALLEY						
Cropped	6,326	8,186	8,800	9,325	10,018	10,654
Idle	1,421	1,164	1,200	854	1,341	2,014
Total	7,747	9,350	10,000	10,179	11,359	12,668
Cleared	*	650	1,033	1,180	1,300	866
ANCHORAGE AREA						
Cropped	503	550	525	711	712	1,062
Idle	247	125	250	150	300	186
Total	750	675	775	861	1,012	1,248
Cleared	*	100	86	262	125	200
KENAI PENINSULA						
Cropped	288	226	355	460	550	835
Idle	391	194	175	220	890	565
Total	679	420	530	680	1,440	1,400
Cleared	*	110	150	225	350	493
KODIAK & ALEUTIAN ISLANDS						
Cropped	71	50	52	70	113	133
Idle	2	—	—	—	27	31
Total	73	50	52	70	140	164
Cleared	*	2	18	70	24	35
TOTAL FOR THE STATE						
Cropped	9,146	10,759	11,538	12,671	13,980	15,577
Idle	3,239	2,017	2,250	2,109	3,279	3,767
Total	12,385	12,776	13,788	14,780	17,259	19,344
Cleared	700	1,022	1,846	2,055	2,445	2,512
TOTAL	13,085	13,798	15,634	16,835	19,704	21,856

serve that area. By 1957 shipments to the Fairbanks market had approached 10,000 quarts a week.

Southeast Alaska was second in fresh milk sales until the 1957 season, when gains in the Tanana Valley area pushed Southeastern to third place. Here production increased from 1.2 to 2.2 million pounds between 1949 and 1953. By 1956 it had dropped back to 1.2 million pounds. Most small producer-distributor dairies in Ketchikan, Sitka, Wrangell and Haines went out of business in 1954. This left only Juneau and Petersburg with local fresh milk.

Declines in dairy farming in Southeastern Alaska are attributed to several pressures. Among these is much more severe competition of imported fresh milk and new substitutes. Improved transportation, better refrigeration, substitution of paper cartons for glass all made shipments from the Pacific Northwest less expensive. Instant non-fat milk powder introduced in 1954 had captured more of the market. Fresh concentrates and frozen milk have won acceptance in the area. On the other hand, local labor costs went up as higher-paying, non-farm jobs become more plentiful. The limited size of nearby markets, and more stringent sanitation requirements,

Table 5.—Acres planted, harvested yields, and estimated farm value of Alaska's farm commodities, by major agricultural areas, for the years 1953 through 1957.

Item and area	1953	1954	1955	1956	1957
BARLEY FOR GRAIN					
SOUTHEAST ALASKA					
Planted ----- acres	2	*	*	*	*
Harvested ----- tons	*	*	*	*	*
TANANA VALLEY					
Planted ----- acres	87	75	91	232	300
Harvested ----- tons	56	54	51	192	203
Value ----- dollars	5,848	5,675	5,085	19,265	22,330
MATANUSKA VALLEY					
Planted ----- acres	190	250	310	389	830
Harvested ----- tons	106	121	222	369	584
Value ----- dollars	10,640	12,130	22,245	36,955	52,560
ANCHORAGE AREA					
Planted ----- acres	*	3	1	*	4
Harvested ----- tons	*	2	1	*	2
Value ----- dollars	*	144	60	*	200
KENAI PENINSULA					
Planted ----- acres	2	5	3	2	15
Harvested ----- tons	*	3	3	1	3
Value ----- dollars	*	288	168	80	300
ALASKA TOTAL					
Planted ----- acres	281	333	405	623	1,149
Harvested ----- tons	162	180	277	562	792
Value ----- dollars	16,488	18,237	27,558	56,300	75,390
OATS FOR GRAIN					
SOUTHEAST ALASKA					
Planted ----- acres	8	*	*	*	*
TANANA VALLEY					
Planted ----- acres	74	40	57	100	176
Harvested ----- tons	41	33	14	76	115
Value ----- dollars	4,100	3,300	1,260	7,524	12,650
MATANUSKA VALLEY					
Planted ----- acres	450	750	537	757	750
Harvested ----- tons	288	522	369	546	505
Value ----- dollars	35,481	58,464	41,328	49,203	50,500
ANCHORAGE AREA					
Planted ----- acres	*	*	10	*	25
Harvested ----- tons	—	—	4	—	10
Value ----- dollars	—	—	480	—	1,000
KENAI PENINSULA					
Planted ----- acres	5	5	20	28	25
Harvested ----- tons	2	3	2	22	11
Value ----- dollars	246	269	246	1,989	1,125

ALASKA TOTAL

Planted	acres	537	795	624	885	976
Harvested	tons	331	558	389	644	641
Value	dollars	39,827	62,033	43,314	58,716	65,275

OAT-PEA HAY**SOUTHEAST ALASKA**

Planted	acres	30	25	67	*	*
Harvested	tons	45	32	100	—	—
Value	dollars	2,025	1,600	4,500	—	—

TANANA VALLEY

Planted	acres	280	200	350	213	349
Harvested	tons	308	220	476	250	330
Value	dollars	18,480	14,300	23,800	12,500	21,450

MATANUSKA VALLEY

Planted	acres	1,400	1,518	1,447	1,569	1,570
Harvested	tons	1,960	2,116	1,727	2,291	2,425
Value	dollars	107,800	105,800	86,350	114,550	145,500

ANCHORAGE AREA

Planted	acres	30	20	15	28	55
Harvested	tons	18	30	25	28	30
Value	dollars	900	1,500	1,250	1,400	1,800

KENAI PENINSULA

Planted	acres	30	42	36	79	92
Harvested	tons	42	50	54	143	88
Value	dollars	2,310	2,750	2,970	7,150	4,840

ALASKA TOTAL

Planted	acres	1,770	1,805	1,915	1,889	2,066
Harvested	tons	2,373	2,448	2,382	2,712	2,873
Value	dollars	131,515	125,950	118,870	135,600	173,590

OAT-PEA SILAGE**SOUTHEAST ALASKA**

Planted	acres	40	50	75	73	72
Harvested	tons	172	220	339	400	317
Value	dollars	2,580	4,400	5,085	8,000	6,340

TANANA VALLEY

Planted	acres	275	300	418	508	560
Harvested	tons	1,018	1,350	1,544	1,916	2,030
Value	dollars	20,360	29,700	30,880	38,320	40,600

MATANUSKA VALLEY

Planted	acres	1,500	1,589	2,210	2,773	3,500
Harvested	tons	6,600	6,039	9,202	12,756	14,400
Value	dollars	145,200	120,780	193,242	255,120	288,000

ANCHORAGE AREA

Planted	acres	61	175	48	172	185
Harvested	tons	220	460	102	638	940
Value	dollars	4,400	9,200	2,040	12,760	18,800

and other technological advances requiring greater capital outlays posed further difficulties for the small dairy. All concentrates and most roughages, except during the summer pasture season, were imported. Shipping costs rose on these raw materials while shipping costs of imported milk went down.

Despite its recent decline, dairying is still a major farm industry in Southeastern Alaska accounting for over 40 per cent of total farm sales. This situation appears likely to continue. Increased production is likely to come from expansion of existing farms rather than new farms.

In the Fairbanks trade area milk production and sales more than doubled during the five-year period. Marketings expanded from 530,000 pounds in 1949 to 625 in 1953, and 1.2 million pounds in 1957. The largest part of this increase came from new farms. Since 1954 prices received by Tanana Valley farmers have been about the same as in the Matanuska Valley—\$10.50 to \$11.00 for 4 per cent test. Although operating costs were slightly higher in the Fairbanks area, land costs and alternative uses for cropland were less than in the Matanuska-Anchorage area. Retail prices for local milk declined from 50 to 55 cents a quart in 1953 to

47c in 1954. Doubling production and sales during the next five years is a real possibility.

In the immediate vicinity of Anchorage milk production more than doubled during the period. The number of grade A producers increased from one to 3. At the same time Kenai Peninsula production dropped to less than half that in 1953. Two major producers have gone out of business. The largest of these was the long-established dairy at Seward. While more sheltered from Stateside imports than Southeast Alaska dairies, the Seward market was exposed to severe competition from Matanuska Valley fresh milk.

Dairying on Kodiak and in the Aleutian and other islands was nominal. A sizeable dairy near Kodiak closed down before 1953. Most of the milk in this area is from one dairy herd and several family milk cows. Prospects and problems relating to increased production are similar to those of Southeastern Alaska. Most future improvement in dairy production will be in the Anchorage, Palmer and Fairbanks market areas.

Item and area	1953	1954	1955	1956	1957
KENAI PENINSULA					
Planted ----- acres	80	40	56	46	130
Harvested ----- tons	232	192	150	184	279
Value ----- dollars	4,640	3,840	2,700	3,680	4,882
KODIAK & ALEUTIAN ISLANDS					
Planted ----- acres	*	*	*	51	80
Harvested ----- tons	—	—	—	115	400
Value ----- dollars	—	—	—	2,300	8,000
ALASKA TOTAL					
Planted ----- acres	1,956	2,154	2,807	3,623	4,527
Harvested ----- tons	8,242	8,261	11,337	16,009	18,366
Value ----- dollars	177,180	167,920	233,947	320,180	366,622
SEEDED GRASS HAY					
SOUTHEAST ALASKA					
Planted ----- acres	130	†	113	*	*
Harvested ----- tons	195	—	61	—	—
Value ----- dollars	8,775	—	2,440	—	—
TANANA VALLEY					
Planted ----- acres	80	†	115	205	137
Harvested ----- tons	160	—	200	267	283
Value ----- dollars	10,400	—	12,000	17,355	18,395
MATANUSKA VALLEY					
Planted ----- acres	950	†	1,916	2,252	1,867
Harvested ----- tons	1,900	—	3,003	3,154	2,622
Value ----- dollars	95,000	—	180,180	157,700	157,320
ANCHORAGE AREA					
Planted ----- acres	155	†	150	222	200
Harvested ----- tons	310	—	150	200	164
Value ----- dollars	15,500	—	7,500	10,000	9,840
KENAI PENINSULA					
Planted ----- acres	175	†	175	152	227
Harvested ----- tons	262	—	225	240	334
Value ----- dollars	14,410	—	12,375	12,000	18,370
KODIAK & ALEUTIAN ISLANDS					
Planted ----- acres	*	†	*	12	*
Harvested ----- tons	—	—	—	2	—
Value ----- dollars	—	—	—	100	—
ALASKA TOTAL					
Planted ----- acres	1,490	†	2,469	2,843	2,431
Harvested ----- tons	2,827	—	3,639	3,863	3,403
Value ----- dollars	144,085	—	214,495	197,155	203,925
SEEDED GRASS FOR SILAGE					
SOUTHEAST ALASKA					
Planted ----- acres	5	†	—	100	175
Harvested ----- tons	30	—	—	300	284
Value ----- dollars	600	—	—	6,000	5,680
TANANA VALLEY					
Planted ----- acres	—	†	14	9	35
Harvested ----- tons	—	—	60	32	50
Value ----- dollars	—	—	1,200	640	1,000

MATANUSKA VALLEY

Planted	acres	65	†	492	546	298
Harvested	tons	390	—	1,129	2,775	1,172
Value	dollars	7,800	—	22,580	55,500	23,440

ANCHORAGE AREA

Planted	acres	38	†	50	35	138
Harvested	tons	190	—	150	122	320
Value	dollars	3,800	—	3,000	2,440	6,400

KENAI PENINSULA

Planted	acres	10	†	123	40	50
Harvested	tons	45	—	347	240	147
Value	dollars	1,125	—	6,940	4,800	2,646

KODIAK & ALEUTIAN ISLANDS****ALASKA TOTAL**

Planted	acres	118	†	679	730	696
Harvested	tons	655	—	1,686	3,469	1,973
Value	dollars	13,325	—	33,720	69,380	39,166

VEGETABLES — CABBAGE**SOUTHEAST ALASKA**

Planted	acres	3	1	2	1	2
Sold	tons	5	5	7	4	11
Value	dollars	720	965	1,120	640	1,540

TANANA VALLEY

Planted	acres	15	10	14	8	19
Sold	tons	96	87	61	45	78
Value	dollars	16,320	12,180	8,990	8,100	14,022

MATANUSKA VALLEY

Planted	acres	22	35	25	25	27
Sold	tons	130	135	70	120	107
Value	dollars	20,800	18,298	9,100	20,400	16,050

ANCHORAGE AREA

Planted	acres	10	12	10	6	17
Sold	tons	42	65	20	23	75
Value	dollars	5,880	8,100	2,800	3,910	11,250

KENAI PENINSULA

Planted	acres	3	5	2	1	4
Sold	tons	5	8	4	4	10
Value	dollars	833	1,440	610	480	1,600

ALASKA TOTAL

Planted	acres	53	63	53	41	69
Sold	tons	278	300	162	196	281
Value	dollars	44,553	40,983	22,620	33,530	44,462

VEGETABLES — CARROTS**SOUTHEAST ALASKA**

Planted	acres	2	1	2	1	3
Sold	tons	4	15	5	3	10
Value	dollars	960	436	1,470	870	1,600

POULTRY was third in importance as a source of Alaska farm income in 1957. Sales were up slightly in 1957, to \$349,800 from \$335,000 in 1956. These figures include a small volume of ducks, turkeys and geese. Farm sales in 1957 were 5 per cent above 1953 and 51 per cent above 1949. Egg production has gone up, while meat sales have gone down became one large broiler farm near Anchorage and several smaller ones in the Matanuska Valley ceased operations.

Several new producers entered the poultry business near Anchorage in late 1954. They were encouraged by the high prices of imported eggs which, for a year or so previously, had sold for 75 to 90c a dozen. Shortly after these new enterprises came into production, the price of imported eggs sharply declined. Specials sold for as low as 49 to 59c a dozen. Merchants featured low priced imported eggs from the states as "loss-leaders". The sharp unforeseen state-side competition eliminated the newest and least efficient producers. The remaining flocks increased in size. Because of the reduction in number of flocks meat sales increased in 1955. The greatest decline in numbers was in farm flocks in the Matanuska Valley.

Quality controls were placed in effect by the Alaska Department of Agriculture in March of 1956 when, for the first time, eggs were required to meet certain standards and to be labelled according to grade and size. This resulted in better and more uniform eggs being marketed. In addition to producing eggs, most farmers candle, grade, package and deliver to retail outlets, or direct to consumers.

Laying hen numbers declined from 1954 to 1956, with a slight upswing in 1957. Over 40,000 hens were on farms in 1954 and over 31,000 in 1957. By the end of 1957 the number on farms was up 8 per cent over the previous year.

OTHER LIVESTOCK production included reindeer meat, beef, wool, pork, mutton and ranch fur, in order of importance of their commercial sales in 1957. There was a steady upward trend in production of livestock products except for furs which remained steady.

Item and area	1953	1954	1955	1956	1957
VEGETABLES — CARROTS					
TANANA VALLEY					
Planted ----- acres	9	3	5	3	19
Sold ----- tons	29	20	24	8	5
Value ----- dollars	6,625	4,600	5,302	1,760	2,466
MATANUSKA VALLEY					
Planted ----- acres	38	25	42	25	38
Sold ----- tons	228	180	225	169	222
Value ----- dollars	41,040	26,900	34,087	28,730	37,825
ANCHORAGE AREA					
Planted ----- acres	5	4	2	3	3
Sold ----- tons	19	11	10	15	12
Value ----- dollars	2,755	1,622	1,680	2,550	2,070
KENAI PENINSULA					
Planted ----- acres	3	2	1	1	3
Sold ----- tons	8	7	4	2	8
Value ----- dollars	1,811	1,482	828	380	1,600
ALASKA TOTAL					
Planted ----- acres	57	35	52	33	66
Sold ----- tons	288	233	268	197	257
Value ----- dollars	53,191	35,040	43,367	34,290	45,561

VEGETABLES — LETTUCE					
SOUTHEAST ALASKA					
Planted ----- acres	2	1	3	1	2
Sold ----- tons	4	2	4	2	8
Value ----- dollars	1,600	1,014	990	500	1,520
TANANA VALLEY					
Planted ----- acres	14	6	2	8	12
Sold ----- tons	34	27	7	10	28
Value ----- dollars	18,185	9,600	3,110	3,000	7,410
MATANUSKA VALLEY					
Planted ----- acres	52	60	56	61	66
Sold ----- tons	156	190	250	259	256
Value ----- dollars	46,800	46,515	48,368	72,520	61,440
ANCHORAGE AREA					
Planted ----- acres	6	5	4	4	15
Sold ----- tons	24	8	3	16	40
Value ----- dollars	5,400	1,355	660	4,480	9,720
KENAI PENINSULA					
Planted ----- acres	1	2	2	2	2
Sold ----- tons	5	4	2	3	6
Value ----- dollars	1,250	1,675	675	960	1,500
ALASKA TOTAL					
Planted ----- acres	75	74	67	76	97
Sold ----- tons	223	231	266	290	338
Value ----- dollars	73,235	60,159	53,803	81,460	81,590

VEGETABLES — CELERY

SOUTHEAST ALASKA

Planted ----- acres	*	1	*	*	*
Sold ----- tons	2	3	1	2	1
Value ----- dollars	500	750	280	500	240

TANANA VALLEY

Planted ----- acres	1	1	*	1	*
Sold ----- tons	9	3	2	6	4
Value ----- dollars	3,440	750	808	1,200	912

MATANUSKA VALLEY

Planted ----- acres	6	5	4	3	6
Sold ----- tons	44	40	35	51	46
Value ----- dollars	9,680	9,658	7,140	10,200	10,010

ANCHORAGE AREA

Planted ----- acres	*	*	*	1	*
Sold ----- tons	2	3	3	5	1
Value ----- dollars	440	720	612	1,020	240

KENAI PENINSULA

Planted ----- acres	*	1	1	1	*
Sold ----- tons	4	3	4	3	2
Value ----- dollars	800	660	816	612	440

ALASKA TOTAL

Planted ----- acres	7	8	5	6	6
Sold ----- tons	61	52	45	67	54
Value ----- dollars	14,860	12,538	9,656	13,532	11,842

POTATOES

SOUTHEAST ALASKA

Planted ----- acres	15	20	12	10	6
U.S. No. 1's sold ----- tons	35	20	25	30	35
Farm value ----- dollars	4,200	2,494	2,050	2,460	3,325
Others sold ----- tons	6	2	4	3	5
Farm value ----- dollars	300	100	160	120	200

TANANA VALLEY

Planted ----- acres	590	475	330	498	470
U.S. No. 1's sold ----- tons	1,900	1,516	1,786	3,013	1,954
Farm value ----- dollars	271,525	205,420	216,038	370,599	297,540
Others sold ----- tons	150	168	186	217	200
Farm value ----- dollars	6,000	8,400	7,440	10,850	10,000

MATANUSKA VALLEY

Planted ----- acres	760	560	530	475	415
U.S. No. 1's sold ----- tons	4,000	3,634	2,500	2,757	3,016
Farm value ----- dollars	436,592	321,725	204,938	330,840	346,196
Others sold ----- tons	167	151	400	825	500
Farm value ----- dollars	5,781	7,550	16,000	38,775	12,440

ANCHORAGE AREA

Planted ----- acres	116	85	137	162	140
U.S. No. 1's sold ----- tons	900	621	703	1,445	1,281
Farm value ----- dollars	92,850	67,780	67,845	173,340	138,348
Others sold ----- tons	75	136	38	188	176
Farm value ----- dollars	3,000	5,440	1,520	11,280	8,800

The reindeer industry exceeded Alaska's beef industry in animal numbers and sales, chiefly to institutions. Because of the peculiar nature of the reindeer business which remained under the guidance and supervision of the Bureau of Indian Affairs, it was not considered a truly agricultural industry and no attempt was made to keep track of its growth and sales.

Major beef and sheep enterprises are located on Kodiak, Aleutian and Chirikof islands where year-around grazing is usually available. Dairy beef is produced in the Matanuska Valley, Tanana Valley, Kenai Peninsula, Southeast Alaska and the Anchorage area.

Beef production on the mainland will develop slowly. The lack of low cost winter forage and grain for finishing beef will continue to discourage ranching development.

The number of known beef cattle went up more than 50 per cent between 1953 and 1955. Most of this growth occurred on Kodiak, Chirikof and the Aleutian islands, although greater numbers may be due in part to a more complete count and better knowledge of remote areas. Island ranchers enlarged their foundation herds during the five years, both by importing cows and by keeping most of their heif-

ers for breeding stock. The few females sold went to individuals starting new herds rather than to slaughter. While new beef enterprises were started in several other areas, the number of animals in these herds remained steady during the five years.

Three-fourths of Alaska's beef cattle population was owned by ranchers on Kodiak Island. The largest slaughter, totaling 125 animals, occurred in 1955. Some were sold to individuals and retail stores but about half were purchased by the Kodiak Naval Station commissary. All animals were grassfat when butchered. They were reported to grade from commercial to high-good. Most of the Kodiak beef contain Herford and Angus bloodlines. Some traces of the Galloway breed, introduced by the Agricultural Experiment Station in 1908, are still evident. Scotch Highlanders imported from Montana in 1955 had not yet been offered for sale.

Sheep numbers went up from 6,000 in 1950 to about 9,000 head in 1953. By 1957 14,000 were reported, for a 55 per cent increase during the five years. Most were on three range wool ranches in the Aleutian Islands. Smaller flocks were located on Chirikof and Kodiak islands, on the Kenai Peninsula and near Fairbanks.

Island sheep ranches depended almost entirely on their wool sales. The wool price support program extended to Alaska in 1954 encouraged an increase of sheep numbers in this area. Alaskan wool is marketed chiefly in Portland.

It is frequently claimed that Aleutian Island wool is of superior quality and brings a premium price because it is relatively clean. Prices reported for Island wool and the statements of buyers indicate these claims may be somewhat exaggerated. Buyers state that Aleutian wool often contains volcanic sand and that its fibers are tender. It arrives at the Portland market after most wool of

KENAI PENINSULA

Planted ----- acres	24	25	19	24	33
U.S. No. 1's sold ----- tons	115	117	41	142	206
Farm value ----- dollars	15,000	15,600	3,445	17,160	22,660
Others sold ----- tons	10	13	24	48	44
Farm value ----- dollars	500	650	960	2,400	2,200

ALASKA TOTAL

Planted ----- acres	1,505	1,165	1,028	1,169	1,064
U.S. No. 1's sold ----- tons	6,950	5,908	5,055	7,387	6,492
Farm value ----- dollars	820,167	613,019	494,316	894,399	808,069
Others sold ----- tons	408	470	652	1,281	925
Farm value ----- dollars	15,581	22,140	26,080	63,425	33,640

*None reported, or less than a half acre reported. Where Kodiak and Aleutian Islands are not mentioned none was reported although small lots may have been planted, harvested, and sold locally.

†Estimate not made in 1954.

a similar grade has been sold. Small volumes are a handicap in marketing.

The number of hogs remained about the same during the five years. Most of these were on two farms in the Anchorage area. They were fed largely on garbage collected from nearby military posts. A few were owned by individuals who keep one or two sows for the family meat supply. The greatest decline was in the Tanana Valley where a sizable pork farm had closed since the 1949 census.

Numbers of horses in Alaska increased during the five year period but remained below 1950 counts. Most owners are hunting guides and are less likely to be included in livestock surveys than farm owners. Riding clubs in Anchorage, Palmer and Fairbanks were importing horses for recreational riding.

Alaska produces only a small amount of the meat that it locally consumed. Meat production will likely remain limited until such time as grain is produced in excess of needs for dairy and poultry feeds. Hog raising then will be possible only if grain is raised on a large enough scale to reduce present costs of production. Beef and lamb production, now primarily confined to Kodiak and the Aleutian Islands, could contribute more meat to the railbelt market if economical means of transportation are developed to bring these animals to the farming areas where they might be finished and slaughtered.

Table 6.—Livestock numbers on Alaskan farms, as of December 31 for the years indicated.

Area	1953	1954	1955	1956	1957
DAIRY COWS					
Southeast Alaska	305	290	225	201	210
Tanana Valley	107	110	129	141	166
Matanuska Valley	881	1,000	1,332	1,567	1,556
Anchorage Area	17	53	55	57	65
Kenai Peninsula	68	82	73	60	57
Kodiak & Aleutian Islands	20	33	22	37	43
ALASKA TOTAL	1,398	1,568	1,836	2,063	2,097
DAIRY HEIFERS, 1-year old and over					
Southeast Alaska	70	110	60	37	50
Tanana Valley	29	20	41	53	73
Matanuska Valley	347	340	481	463	445
Anchorage Area	39	30	33	15	18
Kenai Peninsula	31	30	39	46	41
Kodiak & Aleutian Islands	13	15	11	15	19
ALASKA TOTAL	529	545	665	629	646
DAIRY HEIFERS, under 1 year					
Southeast Alaska	60	30	40	18	35
Tanana Valley	40	50	54	60	80
Matanuska Valley	310	295	392	316	420
Anchorage Area	18	20	17	50	18
Kenai Peninsula	18	35	34	24	43
Kodiak & Aleutian Islands	13	12	5	7	13
ALASKA TOTAL	459	442	542	475	609
DAIRY BULLS					
Southeast Alaska	17	18	13	8	7
Tanana Valley	5	14	11	7	10
Matanuska Valley	38	30	35	25	35
Anchorage Area	1	*	2	2	3
Kenai Peninsula	5	3	6	2	8
Kodiak & Aleutian Islands	3	2	3	1	2
ALASKA TOTAL	69	67	70	45	65
BEEF COWS					
Southeast Alaska	12	2	40	94	50
Tanana Valley	3	5	5	10	22
Matanuska Valley	57	60	70	20	32
Anchorage Area	5	*	10	*	*
Kenai Peninsula	41	83	67	95	66
Kodiak & Aleutian Islands	400	550	880	872	826
ALASKA TOTAL	518	700	1,072	1,091	996
BEEF HEIFERS, 1-year old and over					
Southeast Alaska	21	8	20	21	25
Tanana Valley	5	8	7	5	8
Matanuska Valley	14	4	8	18	21
Anchorage Area	5	*	20	*	*
Kenai Peninsula	32	9	30	33	33
Kodiak & Aleutian Islands	90	132	405	425	244
ALASKA TOTAL	167	161	490	502	331

Goats are of small economic importance in Alaska. Their numbers have been rather stable from 1953 to 1957. They are found mainly on homesteads and rural residence where they require less housing than milk cows and provide a home source of milk for the family.

Stockyards and commercial packing plants do not exist in Alaska. A small commercial slaughter plant in the Matanuska Valley was reopened in 1956 after being idle for several years. It has since provided a limited market for cull dairy cows and beef animals. Retail outlets in Anchorage have begun to feature Alaska meats. This accounts for 1957 being a high meat production year. In the past many dairymen killed most calves at birth. Since the slaughter plant was re-established some are fed for later butchering.

POTATOES were second to fresh milk as a source of farm income. Their relative importance, however, declined from 32 per cent of total farm sales in 1949 to 25 in 1957. This was due more to larger milk sales than to an actual decline in potatoes. The total quantity of potatoes imported into Alaska is unknown, but probably exceeded 5,000 tons yearly. Local potatoes are believed to have provided 65 per cent of the total consumed in

the railbelt, or about half the total for the state. Each year the armed forces purchased more than half the total Alaska farm sales. In general, the yield, packaging and quality of local potatoes improved while plantings declined.

The 1950 census reported 1,030 acres planted and 6,156 tons harvested for sale in 1949. Sales ranged from 5,707 tons in 1955 to a high of 8,668 tons in 1957. The largest acreage planted was 1,505 in 1953, of which about 2,000 tons of the 9,135 harvested were lost during storage. Inadequate storage facilities, including limited refrigeration, disease, demoralized markets, and other factors contributed to this loss. Plantings declined from the high in 1953 to 1,038 in 1955 and 1,064 in 1957. Growers, especially those with 10 acres or less, declined more than planted acreage.

VEGETABLES sold showed an upward trend in value from 1949 to 1957. Acres planted to lettuce increased, while carrot, cabbage and celery plantings remained about the same. Commercial sales of vegetables dropped sharply in 1956. Declines, with the exception of carrots, were due to fewer acres and a

Area	1953	1954	1955	1956	1957
BEEF HEIFERS, under 1 year					
Southeast Alaska -----	11	8	5	3	44
Tanana Valley -----	3	*	*	*	15
Matanuska Valley -----	14	21	17	23	28
Anchorage Area -----	3	30	20	*	*
Kenai Peninsula -----	11	10	31	30	39
Kodiak & Aleutian Islands	100	150	352	252	417
ALASKA TOTAL -----	142	219	425	308	543
BEEF STEERS, 1-year old and over					
Southeast Alaska -----	10	10	25	28	15
Tanana Valley -----	6	7	6	5	7
Matanuska Valley -----	10	86	43	29	26
Anchorage Area -----	2	2	11	*	2
Kenai Peninsula -----	14	9	40	49	12
Kodiak & Aleutian Islands	*	172	150	272	194
ALASKA TOTAL -----	42	286	275	383	256
BEEF BULLS					
Southeast Alaska -----	4	1	3	4	4
Tanana Valley -----	1	*	3	1	2
Matanuska Valley -----	7	17	7	9	8
Anchorage Area -----	1	3	1	*	*
Kenai Peninsula -----	9	6	9	7	12
Kodiak & Aleutian Islands	20	23	40	45	55
ALASKA TOTAL -----	42	50	63	66	81
HOGS					
Southeast Alaska -----	*	*	*	5	7
Tanana Valley -----	127	125	25	62	57
Matanuska Valley -----	87	90	40	17	52
Anchorage Area -----	375	820	640	890	600
Kenai Peninsula -----	10	15	30	25	31
Kodiak & Aleutian Islands	10	20	15	18	23
ALASKA TOTAL -----	609	1,070	750	1,017	770
SHEEP					
Southeast Alaska -----	*	*	*	*	25
Tanana Valley -----	21	20	30	20	25
Matanuska Valley -----	230	10	7	7	13
Anchorage Area -----	4	*	*	*	*
Kenai Peninsula -----	90	80	50	95	70
Kodiak & Aleutian Islands	8,830	9,000	9,767	12,250	13,515
ALASKA TOTAL -----	9,175	9,110	9,854	12,372	13,648
GOATS					
Southeast Alaska -----	20	18	35	25	35
Tanana Valley -----	65	50	35	31	19
Matanuska Valley -----	17	16	25	16	18
Anchorage Area -----	27	21	20	15	20
Kenai Peninsula -----	30	24	35	30	24
Kodiak & Aleutian Islands	*	*	*	*	25
ALASKA TOTAL -----	159	129	150	117	141

HORSES

Southeast Alaska -----	9	10	15	30	20
Tanana Valley -----	5	15	35	36	22
Matanuska Valley -----	47	44	35	26	44
Anchorage Area -----	10	10	5	30	40
Kenai Peninsula -----	11	17	25	21	25
Kodiak & Aleutian Islands	25	64	50	63	25
ALASKA TOTAL -----	107	160	165	206	176

LAYING HENS (Hundreds)

Southeast Alaska -----	45	64	75	72	70
Tanana Valley -----	11	11	10	22	34
Matanuska Valley -----	137	167	85	65	58
Anchorage Area -----	34	88	106	70	82
Kenai Peninsula -----	61	58	42	58	67
Kodiak & Aleutian Islands	20	17	10	5	5
ALASKA TOTAL -----	308	405	328	292	316

*None reported

Table 7.—Livestock products produced and sold in Alaska, and the farm sales value of that sold, by major agricultural areas for the years indicated.

Item	1953	1954	1955	1956	1957
MILK					
SOUTHEAST ALASKA					
Produced --- 1,000 pounds	2,170	1,794	1,573	1,218	1,237
Sold ----- 1,000 pounds	2,136	1,754	1,514	1,159	1,176
1,000 dollars	213	175	132	110	131
TANANA VALLEY					
Produced --- 1,000 pounds	643	748	805	1,026	1,320
Sold ----- 1,000 pounds	625	700	759	983	1,260
1,000 dollars	69	75	84	108	144
MATANUSKA VALLEY					
Produced --- 1,000 pounds	6,539	8,172	9,112	11,500	11,935
Sold ----- 1,000 pounds	6,045	7,616	8,737	11,050	11,627
1,000 dollars	650	838	965	1,189	1,258
ANCHORAGE AREA					
Produced --- 1,000 pounds	151	305	386	389	553
Sold ----- 1,000 pounds	140	280	365	366	514
1,000 dollars	15	30	40	38	52
KENAI PENINSULA					
Produced --- 1,000 pounds	526	588	530	495	296
Sold ----- 1,000 pounds	440	539	458	403	176
1,000 dollars	53	65	55	51	22
KODIAK & ALEUTIAN ISLANDS†					
Produced --- 1,000 pounds	138	209	242	128	133
Sold ----- 1,000 pounds	135	175	117	110	110
1,000 dollars	16	21	14	13	13
ALASKA TOTAL					
Produced --- 1,000 pounds	10,167	11,816	12,648	14,756	15,474
Sold ----- 1,000 pounds	9,521	11,064	11,950	14,071	14,863
1,000 dollars	1,016	1,204	1,290	1,509	1,620

poor growing season. A wet spring and an earlier than normal frost in August reduced yields in 1956.

In 1957 sales of vegetables other than those listed in the tables amounted to 24 per cent of the total. Vegetables which grow well in Alaska and were produced in small quantities were beets, radishes, broccoli, turnips, cauliflower, endive, green onions, kale, parsley, rutabagas and rhubarb. Lesser quantities of brussels sprouts, parsnips, and kohlrabi were raised. Tomatoes, cucumbers and peppers were grown under ploiifilm or glass in limited quantities.

Major vegetables have shown rather erratic annual sales patterns with the exception of lettuce. A greater share of the lettuce market has been taken with the advent and continued use of refrigerated storage, which has significantly lengthened the marketing season and stabilized the quantity offered for sale. Sales of lettuce in 1957 was the highest of the five years and larger than 1949.

RELATED MARKET STATISTICS

Agricultural expansion is limited not by climate but by the number, income and buying habits of Alaska's

people. Commercial farming is limited by the size and accessibility of nearby markets. Nearly all products grown in Alaska are consumed within the state. From 1953 through 1957 only wool and a small amount of reindeer meat and other agricultural products found a market outside the state. Other than fresh milk shipped from Palmer to Fairbanks only a limited quantity of produce moved from one section of Alaska to another. For example, shipments from Southeastern to Anchorage or vice versa were nearly non-existent. Some local products were shipped from Anchorage and Fairbanks to outlets in remote villages.

During this period, about two-thirds of Alaska's population lived in the "railbelt". This section includes all that south-central part of the state along the rail and highway systems extending from Seward and Whittier to and including Fairbanks on the north. Over four-fifths of all the agricultural products grown in Alaska were marketed within the railbelt.

The armed forces have played an important although sometimes negative role as an outlet for local farm products. Service personnel and civilian employees together with their dependents accounted for 70,000 to 80,000 of the total state population of 205,000

Item	1953	1954	1955	1956	1957
EGGS					
SOUTHEAST ALASKA					
Produced ---- 1,000 dozens	51.0	66.0	83.3	80.5	87.5
Sold ----- 1,000 dozens	50.0	65.0	80.0	77.0	82.5
1,000 dollars	49.5	65.0	70.5	68.5	74.3
TANANA VALLEY					
Produced ---- 1,000 dozens	13.1	11.5	10.2	21.4	45.4
Sold ----- 1,000 dozens	12.0	10.5	9.5	20.0	39.9
1,000 dollars	14.2	11.6	10.0	20.2	36.8
MATANUSKA VALLEY					
Produced ---- 1,000 dozens	149.7	169.0	126.0	105.0	81.7
Sold ----- 1,000 dozens	129.4	148.3	110.0	91.0	74.5
1,000 dollars	128.1	135.5	104.5	86.5	65.9
ANCHORAGE AREA					
Produced ---- 1,000 dozens	20.9	29.4	64.5	94.4	94.8
Sold ----- 1,000 dozens	20.2	27.0	57.1	89.0	91.6
1,000 dollars	22.2	30.2	57.7	89.0	88.8
KENAI PENINSULA					
Produced ---- 1,000 dozens	56.5	63.9	54.1	56.5	90.3
Sold ----- 1,000 dozens	55.0	60.0	49.1	46.5	77.8
1,000 dollars	55.0	60.0	46.0	46.5	68.2
KODIAK & ALEUTIAN ISLANDS†					
Produced ---- 1,000 dozens	7.3	6.6	4.7	6.6	2.0
Sold ----- 1,000 dozens	4.8	4.0	3.7	4.6	0.5
1,000 dollars	4.8	4.0	3.7	4.6	0.5
ALASKA TOTAL					
Produced ---- 1,000 dozens	298.5	346.4	342.8	364.4	401.7
Sold ----- 1,000 dozens	271.4	314.8	309.4	328.1	366.8
1,000 dollars	273.8	306.3	292.4	315.3	334.5
POULTRY MEAT					
SOUTHEAST ALASKA					
Produced --- 1,000 pounds	12.4	9.1	8.6	8.0	7.8
Sold ----- 1,000 pounds	12.0	8.1	7.1	6.5	6.1
1,000 dollars	9.0	6.1	4.4	3.6	2.8
TANANA VALLEY					
Produced --- 1,000 pounds	6.7	6.5	2.3	2.7	3.5
Sold ----- 1,000 pounds	4.9	4.5	2.0	2.0	2.1
1,000 dollars	3.2	2.7	1.0	0.9	0.8
MATANUSKA VALLEY					
Produced --- 1,000 pounds	30.6	36.2	28.0	14.8	8.7
Sold ----- 1,000 pounds	18.1	24.7	13.0	6.8	4.3
1,000 dollars	7.6	11.1	5.4	2.7	1.9
ANCHORAGE AREA					
Produced --- 1,000 pounds	45.2	43.0	75.0	25.0	18.1
Sold ----- 1,000 pounds	44.5	40.0	72.0	19.0	14.5
1,000 dollars	31.0	29.8	39.6	9.5	5.0

KENAI PENINSULA

Produced --- 1,000 pounds	15.3	8.0	8.9	12.4	15.6
Sold ----- 1,000 pounds	12.8	5.3	6.9	5.0	8.9
1,000 dollars	7.5	2.7	3.9	2.6	4.6

KODIAK & ALEUTIAN ISLANDS†

Produced --- 1,000 pounds	2.4	2.2	3.5	2.3	1.0
Sold ----- 1,000 pounds	1.2	1.0	1.5	0.8	0.5
1,000 dollars	0.6	0.5	0.7	0.4	0.2

ALASKA TOTAL

Produced --- 1,000 pounds	112.6	105.0	126.3	65.2	54.7
Sold ----- 1,000 pounds	93.5	83.6	102.5	40.1	36.4
1,000 dollars	58.9	52.9	55.0	19.7	15.3

BEEF**SOUTHEAST ALASKA**

Produced --- 1,000 pounds	22.8	20.0	35.1	35.6	27.2
Sold ----- 1,000 pounds	20.4	10.0	21.9	28.2	23.5
1,000 dollars	9.2	5.0	8.8	11.3	8.2

TANANA VALLEY

Produced --- 1,000 pounds	5.0	6.5	7.0	31.4	29.3
Sold ----- 1,000 pounds	2.4	3.5	6.1	29.4	24.9
1,000 dollars	1.0	1.4	2.7	10.3	9.2

MATANUSKA VALLEY

Produced --- 1,000 pounds	103.8	104.0	105.0	98.9	110.0
Sold ----- 1,000 pounds	63.9	62.5	60.0	72.9	79.2
1,000 dollars	24.7	24.0	21.0	23.3	24.4

ANCHORAGE AREA

Produced --- 1,000 pounds	3.5	5.1	25.0	36.3	43.8
Sold ----- 1,000 pounds	2.1	2.0	23.5	34.4	42.0
1,000 dollars	1.0	0.9	9.8	12.5	13.2

KENAI PENINSULA

Produced --- 1,000 pounds	23.0	21.3	26.6	18.3	31.3
Sold ----- 1,000 pounds	18.0	15.4	19.4	11.8	25.4
1,000 dollars	8.8	7.1	8.4	4.4	8.3

KODIAK & ALEUTIAN ISLANDS†

Produced --- 1,000 pounds	66.5	50.0	115.5	73.5	130.0
Sold ----- 1,000 pounds	65.0	45.0	83.2	69.7	117.4
1,000 dollars	26.0	18.0	32.0	31.8	48.0

ALASKA TOTAL

Produced --- 1,000 pounds	224.6	206.9	314.2	294.0	371.6
Sold ----- 1,000 pounds	171.8	138.4	214.1	246.4	312.4
1,000 dollars	70.7	56.4	82.7	93.6	111.3

PORK****TANANA VALLEY**

Produced --- 1,000 pounds	5.4	4.2	2.0	6.9	9.6
Sold ----- 1,000 pounds	2.7	3.0	1.1	5.7	7.1
1,000 dollars	1.6	1.8	0.5	2.9	4.8

MATANUSKA VALLEY

Produced --- 1,000 pounds	17.6	8.0	5.4	5.0	2.9
Sold ----- 1,000 pounds	5.7	0.5	0.8	1.6	1.8
1,000 dollars	3.1	0.3	0.4	0.8	1.0

to 215,000. Over three-fourths of the people with the armed services were located in the railbelt area. The rest were widely scattered in small outposts throughout the state. This excludes those people privately employed on defense construction projects.

While the largest part of the railbelt's economy was derived from military construction, this contributed only indirectly to agricultural development. During the five years, direct military purchases of potatoes and vegetables accounted for about a half of the total farm sales in Alaska. Direct military purchases of fresh milk were less than a tenth of the total sold by Alaska's farmers. No fresh eggs and meat were purchased except for a small quantity of local beef bought by the Kodiak Naval Station.

Alaska's population is growing although the rate fluctuates from year to year. In 1910 there were over 64,000 people in the Territory. When statehood was granted in 1958, Alaska's population was estimated at 213,000.

A large portion of Alaska's population is more transient than in other states. Military personnel are seldom permanent residents. They usually do not consider Alaska their legal residence. Many think of Alaska as just another overseas assignment. Many civilians come to the state

during the summer when work in construction, fishing and mining is most active. They leave when work diminishes — taking their earnings elsewhere to spend. Many other government agencies and contract service organizations recruit personnel for two year tours of duty.

AGRICULTURAL PRICES

There is no formal documentation of prices paid or received by farmers in Alaska comparable to such statistical series available for other states. Price data reported here were provided by the Matanuska Valley Farmers Cooperating Association and the military services. Prices received by farmers in the Matanuska Valley as shown in this summary, are an average for the season.*

*The method described in "Some Economic Aspects of Farming in Alaska" by Mimms, Paschal and Fuhri-man, page 87, was used to bring "prices paid by farmers" up to date. "Prices paid" throughout a specific year were not always available. They could not be weighed statistically by quantities sold, but an attempt was made to weigh them on a judgment basis. This was done by using prices in effect at the time when purchases were estimated to be heaviest. For example, the prices paid for commercial fertilizer during the spring were considered representative. The summer and fall prices of binder twine were considered most representative for that time.

Item	1953	1954	1955	1956	1957
ANCHORAGE AREA					
Produced --- 1,000 pounds	62.5	94.6	98.5	76.0	122.3
Sold ----- 1,000 pounds	61.6	92.0	97.5	75.0	120.3
1,000 dollars	21.6	26.6	34.9	30.0	48.1
KENAI PENINSULA					
Produced --- 1,000 pounds	1.6	2.0	2.8	3.6	3.9
Sold ----- 1,000 pounds	1.2	1.0	1.2	2.6	2.2
1,000 dollars	0.7	0.5	0.5	1.0	0.8
KODIAK & ALEUTIAN ISLANDS†					
Produced --- 1,000 pounds	1.3	1.9	3.7	2.8	3.3
Sold ----- 1,000 pounds	1.0	1.5	2.8	2.2	2.5
1,000 dollars	0.4	0.7	1.4	1.1	1.3
ALASKA TOTAL					
Produced --- 1,000 pounds	88.4	110.7	112.4	94.3	142.0
Sold ----- 1,000 pounds	72.2	98.0	103.4	87.1	133.9
1,000 dollars	27.4	29.9	37.7	35.8	56.0
MUTTON**					
SOUTHEAST ALASKA					
Produced ----- pounds	*	*	*	*	598
TANANA VALLEY					
Produced ----- pounds	480	500	450	550	400
Sold ----- pounds	190	170	150	190	140
1,000 dollars	90	80	70	80	60
MATANUSKA VALLEY					
Produced ----- pounds	3,240	320	160	100	350
Sold ----- pounds	3,110	—	—	—	—
1,000 dollars	2,003	—	—	—	—
KENAI PENINSULA					
Produced ----- pounds	1,000	1,060	590	600	400
Sold ----- pounds	650	700	400	200	300
1,000 dollars	320	350	200	100	150
KODIAK & ALEUTIAN ISLANDS†					
Produced ----- pounds	3,510	4,250	9,780	9,950	20,990
Sold ----- pounds	2,310	1,750	1,960	2,450	13,630
1,000 dollars	1,160	780	980	1,230	3,500
ALASKA TOTAL					
Produced ----- pounds	8,230	6,130	10,980	11,200	22,738
Sold ----- pounds	6,260	2,620	2,510	2,840	14,070
1,000 dollars	3,573	1,210	1,250	1,410	3,710
WOOL**					
KODIAK & ALEUTIAN ISLANDS†					
Sold ----- 1,000 pounds	75.0	72.0	88.9	91.9	97.7
Sold ----- 1,000 pounds	37.5	30.0	43.8	45.9	58.6
RANCH FUR**					
SOUTHEAST ALASKA					
1,000 dollars	57.5	37.0	56.5	70.0	50.0

*None reported or known.

**None reported for other areas.

†Includes Chirikof Island.

Table 8.—Typical prices received by Matanuska Valley farmers for their farm products during the indicated years.

Product		1944	1948	1952	1953	1954	1955	1956	1957
Dollars									
Milk	cwt	6.50	8.85	10.50	10.75	11.00	11.00	10.76	10.95
Eggs**	doz	.97	1.00	.99	.99	.91	.78	.82	.92
Poultry meat	lb	.85	.50	.75	.75	.52	.42	.40	.44
Beef	cwt	23.00	37.04	50.50	40.00	38.00	35.00	31.96	30.81
Pork	cwt	20.00	*	40.00	58.00	60.00	50.00	50.00	55.56
Potatoes, U.S. No. 1	cwt	4.75	3.26	5.62	3.00	4.79	6.31	6.13	6.22
Head lettuce	cwt	10.51	9.75	14.56	13.60	12.24	12.00	13.00	14.00
Celery	cwt	15.20	9.75	13.50	11.00	14.00	16.00	16.00	12.00
Carrots	cwt	6.00	7.02	9.19	9.00	13.00	13.00	10.00	11.00
Radishes	cwt	27.00	6.40	19.00	11.00	16.00	14.00	18.00	24.00
Cauliflower	cwt	14.80	14.60	25.00	22.00	20.00	20.00	22.00	20.00
Cabbage	cwt	4.63	7.00	8.23	8.00	7.04	8.00	10.00	10.00
Rhubarb	cwt	6.00	*	10.00	10.00	14.00	*	12.00	12.00
Turnips	cwt	6.00	6.84	7.75	*	5.00	*	10.00	8.00
Beets	cwt	*	9.75	9.27	8.36	*	*	*	13.00
Broccoli	cwt	*	*	20.50	25.00	28.00	*	22.00	20.00
Greens	cwt	*	*	12.00	15.00	12.00	16.00	18.00	16.00
Green onions	cwt	9.90	8.00	18.00	20.00	18.00	16.00	20.00	20.00

*Information unavailable.

**Large Grade A eggs after Alaska's egg grading law became effective in 1956.

In general, the level of farm prices paid or received remained fairly stable during the 1953-1957 period, with feed, seed and fertilizer costs actually edging down from year to year as volumes imported went up. Although not tabulated here, the prices of labor and services and of machinery, equipment and similar metal goods continued to rise, somewhat offsetting savings in feed, seed and fertilizer. This was especially true of prices for machinery, vehicles, equipment and most metal goods such as nails, wire or roofing. Prices of many of these items are not readily available for year to year comparisons.

Prices received by farmers for their produce remained fairly stable during the five years, particularly for milk and potatoes which comprised a major portion of farm sales. Vegetable, meat and egg prices varied considerably from year to year. Prices received by farmers for fresh milk varied less from season to season than did the prices received for potatoes, vegetables, meats and eggs.

The prices tabulated here are primarily those received in the Matanuska Valley, Alaska's major farming area, but they are fairly typical of fluctuations in the state as a whole. It appears that prices received in the Kenai Peninsula and South-eastern Alaska were 5 to 15 per cent lower, while those for the Fairbanks area were higher by a similar amount. Variations are chiefly attributed to difference in shipping costs within the state, as well as between each city and Seattle.

The greatest upswing in Alaska's agricultural prices occurred during the five years immediately following the close of World War II. High wartime salaries and wages continued to rise during those years. This was largely caused by substantial military expenditures for crash construction programs, together with rising transportation charges. These factors in turn caused higher prices for both farm produce and farm production services and supplies. Although retail food prices declined between 1953 and 1957, most consumer goods and services continued to rise.

Table 9.—Potatoes and vegetables delivered to Elmendorf Field (Anchorage) and Ladd Field (Fairbanks), and monthly hundredweight prices paid to farmers during the years indicated (from military procurement records).

Month	Troop issue				Commissary resale			
	1954	1955	1956	1957	1954	1955	1956	1957
ELMENDORF AIRFORCE BASE								
POTATOES								
AUG. -- tons	*	85.1	*	94.4	*	*	*	10.0
dollars	—	4.96	6.14	7.05	—	7.24	6.88	7.80
SEPT. -- tons	*	110.0	68.3	81.5	*	*	42.2	15.0
dollars	4.96	4.25	6.25	4.80	5.50	5.48	6.95	5.90
OCT. -- tons	*	122.0	104.6	68.4	*	*	43.6	22.6
dollars	4.96	4.25	6.25	4.87	6.08	5.58	7.05	5.90
NOV. -- tons	*	65.5	85.1	92.0	*	*	45.0	15.8
dollars	4.96	4.35	6.25	4.37	5.89	5.67	7.15	5.95
DEC. -- tons	*	139.6	131.4	95.8	*	*	45.0	15.7
dollars	4.96	4.50	6.25	5.20	5.89	5.67	7.25	6.15
JAN. -- tons	169.2	58.4	107.8	93.6	*	*	42.5	15.7
dollars	4.96	4.75	6.25	5.20	6.00	5.70	7.35	6.25
FEB. -- tons	122.2	151.2	79.4	77.0	*	*	44.0	15.8
dollars	4.96	4.80	6.25	5.20	6.20	5.75	7.45	6.35
MAR. -- tons	125.5	103.9	87.5	73.5	*	*	45.0	15.8
dollars	4.96	4.86	6.25	6.50	6.40	5.80	7.55	6.35
APR. -- tons	114.5	*	95.0	67.5	*	*	37.5	28.9
dollars	4.96	4.86	6.25	7.00	6.53	5.85	7.65	6.50
MAY -- tons	144.6	*	106.5	80.0	*	*	31.2	18.8
dollars	4.96	4.86	6.25	7.36	6.53	5.90	7.80	6.50
JUN. -- tons	71.4	*	76.0	*	*	*	17.0	*
dollars	4.96	4.86	6.25	*	6.53	6.00	7.95	*
JUL. -- tons	98.2	*	81.0	*	*	*	*	*
dollars	4.96	5.99	6.90	*	7.24	6.68	*	*
CABBAGE								
AUG. -- tons	2.9	1.4	3.6	2.0	*	*	2.3	*
dollars	5.60	4.90	10.00	10.00	7.00	5.00	10.00	*
SEPT. -- tons	6.4	4.5	2.4	4.7	*	*	2.8	4.0
dollars	5.40	4.90	7.00	7.45	7.00	5.00	10.00	8.00
OCT. -- tons	5.7	*	6.8	*	*	5.5	3.0	*
dollars	5.70	4.90	10.00	7.85	7.40	5.90	10.00	9.00
NOV. -- tons	*	2.4	8.2	4.8	*	*	4.2	*
dollars	6.70	5.90	10.00	8.30	8.00	6.40	10.00	*
DEC. -- tons	*	*	3.6	3.0	*	*	3.1	2.3
dollars	7.00	6.70	10.00	8.75	8.00	6.90	10.00	10.00
JAN. -- tons	**	*	**	4.8	**	*	**	1.9
dollars	—	7.90	—	8.00	—	8.90	—	8.00
FEB. -- tons	**	**	**	2.0	**	**	**	3.0
dollars	—	—	—	8.00	—	—	—	8.00
MAR. -- tons	**	**	**	**	**	**	**	*
dollars	—	—	—	11.00	—	—	—	—
CARROTS								
AUG. -- tons	**	**	**	**	**	**	**	**
dollars	—	—	—	—	—	—	—	—
SEPT. -- tons	*	2.1	*	*	*	5.8	*	*
dollars	—	13.90	16.00	—	—	8.40	10.00	—
OCT. -- tons	*	1.5	*	*	*	6.2	*	*
dollars	—	13.90	16.00	—	—	8.40	10.00	—

NOV. .. tons	*	*	*	*	*	*	*	*
dollars	—	14.90	16.00	—	—	9.40	11.00	—
DEC. .. tons	*	*	*	*	*	*	*	*
dollars	—	14.90	16.25	—	—	9.40	11.00	—
JAN. .. tons	*	.8	1.7	*	*	6.1	5.7	*
dollars	—	15.90	16.25	—	—	10.40	11.25	—
FEB. .. tons	*	**	1.4	*	*	*	3.8	*
dollars	—	—	16.25	—	—	—	11.25	—
MAR. .. tons	*	**	1.0	*	*	*	3.6	*
dollars	—	—	16.25	—	—	—	11.25	—

LETTUCE†

AUG. .. tons	4.6	4.6	*	24.1	—	—	—	—
dollars	13.90	13.50	13.50	17.00	—	—	—	—
SEPT. .. tons	11.6	11.6	*	*	—	—	—	—
dollars	14.50	13.23	13.50	17.00	—	—	—	—

CELERY

SEPT. .. tons	7.8	10.0	*	*	2.4	2.0	*	*
dollars	*	14.00	—	—	*	14.00	—	—
OCT. .. tons	6.2	5.0	*	*	3.2	2.0	*	*
dollars	*	14.00	—	—	*	14.00	—	—
NOV. .. tons	7.8	5.0	*	*	3.2	2.0	*	*
dollars	*	14.00	—	—	*	14.00	—	—

RADISHES

JUL. .. tons	1.3	*	*	1.1	*	*	*	.5
dollars	17.00	—	—	19.45	—	—	—	12.00
AUG. .. tons	1.3	*	1.6	.9	*	*	1.4	2.3
dollars	17.00	—	25.00	19.45	—	—	25.00	12.00
SEPT. .. tons	1.3	*	.8	1.4	*	*	.8	.9
dollars	17.00	—	25.00	19.45	—	—	25.00	12.00

LADD AIRFORCE BASE

POTATOES

AUG. .. tons	*	*	*	84.0	*	*	*	14.2
dollars	—	8.00	6.21	8.30	—	—	6.50	9.30
SEPT. .. tons	*	53.0	*	48.0	*	22.3	*	11.1
dollars	4.84	6.21	6.00	6.25	7.00	6.50	7.20	7.13
OCT. .. tons	*	87.8	*	84.2	*	12.8	*	14.0
dollars	4.84	6.21	6.00	6.60	6.00	6.50	7.20	7.50
NOV. .. tons	*	69.6	*	48.0	*	16.0	*	61.6
dollars	4.84	6.21	6.00	6.75	6.00	6.50	7.20	7.66
DEC. .. tons	*	86.0	*	54.0	*	14.0	*	3.1
dollars	6.30	6.21	6.00	6.15	7.00	6.50	7.20	7.30
JAN. .. tons	124.6	105.3	91.6	66.0	*	16.6	15.0	5.3
dollars	6.40	6.21	6.00	7.00	7.00	6.50	7.20	7.50
FEB. .. tons	57.4	70.0	54.0	60.0	*	15.0	10.4	4.0
dollars	6.50	6.21	6.00	7.00	6.50	6.50	7.20	7.75
MAR. .. tons	165.2	90.0	80.9	66.0	*	11.6	2.15	2.5
dollars	7.15	6.21	6.00	7.00	7.00	6.50	7.20	7.50
APR. .. tons	112.0	80.0	*	60.0	*	14.2	*	2.5
dollars	7.47	6.21	6.00	7.50	7.00	6.50	7.20	7.50
MAY .. tons	110.3	99.1	90.4	66.0	*	13.9	10.8	2.5
dollars	7.99	6.21	6.00	8.00	7.50	6.50	7.20	7.50
JUN. .. tons	111.0	6.8	84.2	*	*	11.0	12.4	*
dollars	8.00	6.21	6.00	—	7.50	6.50	7.20	—
JUL. .. tons	83.8	*	78.7	*	*	*	15.4	*
dollars	8.00	6.21	8.15	—	8.90	6.50	9.15	—

CABBAGE

AUG. -- tons	1.8	1.8	*	2.7	*	*	*	*
dollars	4.94	4.90	10.00	12.00	4.94	5.40	10.00	12.00
SEPT. -- tons	8.8	8.8	*	2.7	*	*	*	*
dollars	5.00	5.90	7.50	12.00	5.00	6.00	8.00	12.00
OCT. -- tons	7.6	5.8	*	*	*	*	*	*
dollars	6.62	6.00	7.50	12.00	6.62	6.00	8.00	12.00
NOV. -- tons	6.0	6.0	4.9	*	*	*	1.8	*
dollars	7.94	6.00	7.50	12.00	7.94	6.00	8.00	12.00
DEC. -- tons	1.1	1.1	*	*	*	*	*	*
dollars	9.64	8.65	7.50	12.00	9.64	9.50	8.00	12.00
JAN. -- tons	**	*	**	4.8	**	*	**	*
dollars	—	9.50	—	10.40	—	10.00	—	10.40
FEB. -- tons	**	*	**	5.0†	**	*	**	*
dollars	—	10.00	—	10.40	—	10.00	—	10.40
MAR. -- tons	**	**	**	1.4	**	**	**	**
dollars	—	—	—	10.40	—	—	—	—

CARROTS

SEPT. -- tons	8.0	5.0	5.8	*	*	2.8	2.4	*
dollars	7.00	6.90	10.00	—	13.00	11.90	14.00	—
OCT. -- tons	*	*	3.2	*	*	*	4.0	*
dollars	7.00	6.90	8.50	—	12.00	11.90	15.00	—
NOV. -- tons	5.6	2.4	7.6	*	*	*	4.0	*
dollars	7.00	7.90	10.00	—	13.00	12.90	15.00	—
DEC. -- tons	4.1	4.1	5.8	*	*	*	3.4	*
dollars	7.00	7.90	10.00	—	13.00	12.90	15.00	—
JAN. -- tons	**	7.9	7.6	*	**	*	4.0	*
dollars	—	8.90	10.00	—	—	13.90	15.00	—
FEB. -- tons	**	2.0	3.8	*	**	*	2.1	*
dollars	—	8.90	10.00	—	—	13.90	15.00	—
MAR. -- tons	**	4.0	4.4	*	**	*	2.0	*
dollars	—	9.80	10.00	—	—	13.90	15.00	—

LETTUCE†

AUG. -- tons	23.6	20.9	14.5	31.9	—	—	—	—
dollars	11.90	9.40	15.00	13.70	—	—	—	—
SEPT. -- tons	23.5	23.5	14.2	15.8	—	—	—	—
dollars	12.00	10.50	15.00	13.70	—	—	—	—

RADISHES

JUL. -- tons	4.6	*	*	1.6	*	*	*	1.2
dollars	12.00	—	—	17.00	—	—	—	11.00
AUG. -- tons	4.6	*	1.0	1.4	*	*	1.5	1.3
dollars	12.00	—	23.00	17.00	—	—	23.00	11.00
SEPT. -- tons	3.7	*	1.7	1.2	*	*	1.3	1.4
dollars	12.00	—	23.00	17.00	—	—	23.00	11.00

CELERY

SEPT. -- tons	5.6	6.5	*	*	3.8	4.2	*	*
dollars	11.80	11.50	—	—	11.80	11.50	—	—
OCT. -- tons	5.6	5.4	*	*	3.8	4.2	*	*
dollars	11.80	11.70	—	—	11.80	11.70	—	—
NOV. -- tons	4.2	5.4	*	*	2.8	4.2	*	*
dollars	11.80	12.00	—	—	11.80	12.00	—	—

*Information not at hand.

**Local supplies not available.

†Commissary and troop issue combined.

Table 10.—Selected feed, seed and fertilizer prices paid by farmers in Alaska's Matanuska Valley, for years indicated.

Item	1944	1948	1950	1953	1954	1955	1956	1957	
FEEDS DOLLARS									
Dairy ration ----- cwt	5.10	7.00	6.75	7.30	*	6.79	6.15	6.70	
Soybean meal ----- cwt	5.20	8.70	7.75	9.50	8.50	7.94	7.70	7.90	
Linseed meal ----- cwt	4.95	8.40	7.45	8.50	8.00	7.80	8.00	7.70	
Bone meal ----- cwt	5.00	6.65	7.00	7.50	8.00	7.50	8.00	8.00	
Dairy molasses ----- cwt	5.00	7.00	*	7.65	7.00	*	7.40	*	
Salt block ----- 50 lbs	2.20	2.95	2.95	*	3.50	3.50	3.57	3.50	
Calf meal ----- cwt	7.00	10.90	11.25	12.25	12.25	12.06	12.00	12.15	
Alfalfa hay ----- ton	*	90.00	90.00	100.00	*	*	92.00	90.00	
Starter mash ----- cwt	5.65	8.00	7.75	8.00	8.44	7.78	7.88	8.44	
Laying mash ----- cwt	5.20	7.85	7.25	7.90	7.90	7.68	7.40	7.31	
Hen scratch ----- cwt	4.60	7.30	7.00	7.50	7.40	7.08	7.10	7.19	
Oyster shell ----- cwt	3.00	4.30	*	5.00	5.20	5.20	5.00	5.50	
Wheat, ground ----- cwt	5.85	8.15	7.56	7.50	7.50	*	7.25	7.25	
Corn, ground ----- cwt	5.00	8.70	6.80	7.10	7.05	6.80	6.90	7.80	
Barley, rolled ----- cwt	4.75	6.80	6.50	7.37	6.66	6.40	6.67	6.07	
Oats, rolled ----- cwt	4.50	6.50	6.00	7.00	7.00	6.58	7.00	6.60	
SEEDS									
Oats ----- cwt	5.35	8.80	6.75	8.30	6.58	7.50	6.75	7.00	
Peas ----- cwt	8.75	10.70	9.05	11.75	8.95	13.35	12.85	9.65	
Barley ----- cwt	6.00	9.55	11.50	8.30	6.80	*	7.50	6.00	
Veitch ----- cwt	10.00	12.25	12.95	12.30	8.00	11.15	11.55	13.90	
Wheat ----- cwt	5.00	10.60	8.00	9.60	7.50	*	7.25	*	
Potatoes ----- cwt	6.65	*	5.00	7.00	*	6.70	6.20	5.50	
Bromegrass ----- lb	.27	.39	.75	.35	.26	.35	.34	.54	
Alsike clover ----- lb	.35	.75	.60	.75	.34	*	*	*	
Lettuce ----- lb	*	*	4.50	4.50	4.50	4.15	4.50	4.50	
Carrot ----- lb	5.70	2.25	2.25	2.25	2.25	2.25	2.25	2.25	
FERTILIZERS									
Ammonium nitrate --- cwt	5.60	5.90	6.51	7.08	7.70	7.35	6.90	6.75	
Ammonium sulfate --- cwt	4.00	5.60	5.95	6.00	6.52	5.57	5.38	5.31	
Sodium nitrate ----- cwt	3.75	4.80	5.50	6.85	6.85	*	*	7.31	
Ammophos 16-20 ----- cwt	4.35	5.70	5.90	6.50	7.85	7.00	7.21	6.58	
Ammophos 11-48 ----- cwt	*	*	*	7.40	8.75	8.40	8.74	7.87	
Superphosphate** --- cwt	3.90	5.40	5.50	6.92	7.25	6.62	7.44	6.70	
Potassium chloride --- cwt	3.95	4.50	4.65	4.50	4.88	4.23	4.00	4.05	
Mixed (5-10-5) ----- cwt	3.65	4.05	4.90	6.00	5.03	5.70	*	5.68	

*Information unavailable

**For 20% superphosphate until 1953, for 45% treble superphosphate thereafter.

Neither prices paid nor received include patronage refunds for those who sold or purchased cooperatively. In the Matanuska Valley "patronage certificates," payable in ten years at the discretion of the board of directors, were larger than in former years. They amounted to as much as 12 to 20 percent on purchases from or sales to the cooperative during the years studied. Until 1956, when the Matanuska Valley Farmers Co-operating Association merged with a similar es-

sociation at Fairbanks, their sales of farm supplies were largely limited to farmers in the Matanuska Valley.

PRICES RECEIVED Prices of most Alaska products during the 1953 - 1957 period were considerably above 1949 levels. In 1957 prices of Alaska's significant farm commodities no more than equalled 1953 prices, and for some were

Table 11.—Alaska's population for selected years (from the census for 1910 through 1929, Alaska Resource Publication Reports 3 & 5 for 1939 through 1956, and Alaska Resource Development Board for 1957 & 1958).

Year	Total	Civilian
1910	64,356	—
1920	55,036	—
1929	59,278	—
1939	72,524	72,000
1940	74,000	73,000
1941	83,000	74,000
1942	137,000	77,000
1943	226,000	74,000
1944	180,000	76,000
1945	138,000	78,000
1946	103,000	85,000
1947	117,000	91,000
1948	125,000	98,000
1949	134,000	104,000
1950	137,000	111,000
1951	161,000	123,000
1952	191,000	141,000
1953	205,000	155,000
1954	208,000	159,000
1955	209,000	159,000
1956	206,000	161,000
1957	211,000	164,000
1958	213,000	165,000

slightly less. Potatoes were an exception, reflecting depressed prices in 1953. Most other vegetables also brought slightly higher prices in 1957 than in 1953.

Basic farm prices for fresh milk held steady during the period, farm prices varying chiefly in response to seasonal gluts. Egg prices dropped 7c a dozen from their 1953 price of 99c a dozen. Poultry meats fell from 75c a pound to 44c in 1957. This drop is partially explained by the fact that a greater proportion of the poultry meats during the earlier years were fryers and broilers while practically all that for 1956 and 1957 was meat from "cull" laying hens. Most poultry, like beef and pork, were killed and dressed by the farmer and sold directly to the consumers. This accounts for the seemingly high Alaska farm prices which actually include what in other states would be a middle-man's share. This is a differ-

entiating characteristic of farming in Alaska, where farmers usually perform more marketing and processing services than is normal in most stateside situations.

Potato and vegetable prices were lower in the 1953-1957 period than during the previous five years. Prices received fluctuated considerably from year to year — potatoes from an average of \$3.00 cwt in 1953 to \$6.22 in 1957. Prices potato farmers received from retail stores fluctuated less from year to year than prices paid by the armed forces. In most seasons cauliflower, broccoli, beets, greens and rhubarb were available for only a short period of time and in limited volume. Farmers usually did the selling, delivering and collecting in addition to grading and packaging.

PRICES PAID by Matanuska Valley farmers for materials and supplies stabilized during the 1953-1957 period as compared with the preceding five years. Prices shown in the tables were obtained from the cooperative in Palmer. This association was a major source of farm supplies in Alaska, selling more than half the total for the entire state.

Seed prices varied considerably from year to year but 1953-1957 costs were down from the 1948-1950 highs. Increased volumes and sales in larger quantities lowered seed costs more than actual changes in market prices.

All major fertilizers were cheaper in 1957 than in 1953. Purchasing in larger quantities by the local trade and improved shipping routes were largely, if not entirely, responsible for declines in fertilizer costs. Large independent growers buying directly from stateside distributors and cooperative members accepting "off-car" deliveries in quantity paid about 5 per cent less than the indicated prices for fertilizers, feed and some seeds.

Costs of petroleum products, building materials, machinery, and equipment increased significantly between 1948 and 1958. Prices paid by farmers for metal equipment and machinery also went up.

TRANSPORTATION Alaska is separated from the contiguous United States by British Columbia and the Yukon Territory, or by a 1500

mile sea route to Seattle. Boat shipment takes 5 to 8 days from Seattle to Seward, plus one day by train or truck to Anchorage, and another day to Fairbanks. Truck shipment from Seattle to Anchorage requires 4 to 8 days.

Water transportation serving Alaska in 1957 included two steamships, three barges, and one vessel (The North Star) operated by the Bureau of Indian Affairs and calling on many remote native villages. Another privately owned boat, the Expansion, carried mail to the Aleutians from Seward by way of Kodiak.

According to the Bureau of Public Roads there were about 5,000 miles of roads in Alaska. More than 25 trucking companies served Alaska. The Department of Interior operated the only railroad facilities in Alaska, extending from Seward to Fairbanks. There were 483 miles of main line and 59 miles of branch lines serving the railbelt. A number of river boats and barges plied the Yukon and Kuskokwin Rivers. Freight was transferred from a rail terminal to boats at Nenana for movement to remote villages by river routes. Some freight was also brought up these rivers from ocean vessels.

Transportation charges were an important factor in determining the cost of Alaskan farm production. For example, dairy concentrate at \$98 a ton in Seattle when delivered to Palmer was worth about \$135 a ton.

Bulk shipping was not yet available to Alaska in 1957. An idea of the advantages inherent in bulk shipments is seen in the rates to Japan from New Westminster which were reported to be from \$5 to \$6 per ton. In contrast pelleted feed selling for \$19 a ton in Vancouver was worth \$65 delivered at Kodiak. For oats and barley the cost of transportation often equalled or was greater than the price of the commodity in Seattle.

Between 1948 and 1958 the cost of shipping between Seattle and Palmer increased by 24 per cent while rates between Seattle and Fairbanks rose only 11 per cent. Shipping costs between Seattle and Palmer went up for 15 selected commodities, while they were reduced for 5 of the same 15 commodities shipped to Fairbanks.

Wharfage and handling charges accounted for 3 per cent of average shipping costs in 1948. They increased to 4 per cent in 1958. Handling

and wharfage increases during the ten-year period were about double that for freight.

The average difference in shipping charges between Seattle-and-Palmer and Seattle-and-Fairbanks was 58c per cwt. Seattle-Anchorage charges were approximately 26c less than to Palmer and were lower for Seward or Homer.

Where speed and perishability were important, some commodities were moved by air freight. Air freight to Anchorage or Fairbanks generally cost between \$17 to \$20 per hundred pounds, depending on the commodity, quantity and destination. Transportation by truck over the Alaska highway was \$6.50 to \$9.50 per cwt.

RETAIL FOOD PRICES—A quarterly report on Alaska's food prices originated in 1949. Volunteer enumerators have since then regularly collected food prices from retail merchants in selected Alaska cities. Collection takes place simultaneously in each city during the first three days of the week containing the 15th of December, March, June and September. Each merchant quotes prices of each foodstuff, of the brand and size within each classification selling in the greatest volume. Prices from 3 to 6 stores in each city are averaged to obtain survey prices. In 1949, four Alaska cities were enumerated. By 1957, eight cities were being surveyed and 40 food items were compared with an equal number of similar units priced in Seattle stores the previous month. In this report 25 grocery items are listed, all that were priced during the early years. Quarterly reports were averaged for the annual prices presented in the table.

The market basket selection is believed representative of what Alaska consumers were using. Comparisons with other weighted surveys show that the selected items are typical.

In Juneau, Anchorage and Fairbanks, the 25 food items declined in price in relation to Seattle during the period 1953 to 1957. During these years, however, Seattle's market basket had continued to rise in cost from \$10.56 in 1953 to \$10.88 in 1957.

Juneau and Anchorage enjoyed the greatest decline—down 8 per cent—in relation to Seattle

Table 12.—Average retail food prices of 25 items in Juneau, Anchorage and Fairbanks, compared with Seattle, for the years indicated.

Item	Unit	1953					1954					1955					1956					1957				
		1953	1954	1955	1956	1957	1953	1954	1955	1956	1957	1953	1954	1955	1956	1957	1953	1954	1955	1956	1957	1953	1954	1955	1956	1957
		Dollars										Dollars														
SEATTLE												JUNEAU														
Bread	1½ lb loaf	.26	.26	.28	.30	.32	.39	.38	.38	.39	.40	.39	.38	.38	.39	.40	.39	.38	.38	.39	.40	.39	.38	.38	.39	.40
Ground beef	1 lb	.45	.42	.39	.39	.44	.60	.62	.58	.79	.53	.60	.62	.58	.79	.53	.60	.62	.58	.79	.53	.60	.62	.58	.79	.53
Round steak	1 lb	.82	.81	.83	.91	96	.98	1.00	.97	.88	.98	.98	1.00	.97	.88	.98	.98	1.00	.97	.88	.98	.98	1.00	.97	.88	.98
Chuck roast	1 lb	.53	.52	.51	.48	.53	.74	.73	.70	.60	.69	.74	.73	.70	.60	.69	.74	.73	.70	.60	.69	.74	.73	.70	.60	.69
Bacon, sliced	1 lb	.77	.84	.69	.60	.78	.92	.95	.81	.70	.87	.92	.95	.81	.70	.87	.92	.95	.81	.70	.87	.92	.95	.81	.70	.87
Butter	1 lb	.76	.72	.70	.72	.74	.84	.78	.77	.78	.80	.84	.78	.77	.78	.80	.84	.78	.77	.78	.80	.84	.78	.77	.78	.80
Milk, fresh	1 qt	.20	.20	.21	.22	.24	.34	.34	.33	.32	.34	.34	.34	.33	.32	.34	.34	.34	.33	.32	.34	.34	.34	.33	.32	.34
Milk, evaporated	14½ oz	.14	.14	.14	.14	.14	.19	.18	.18	.18	.18	.19	.18	.18	.18	.18	.19	.18	.18	.18	.18	.19	.18	.18	.18	.18
Ice cream	1 qt	.70	.70	.70	.70	.70	.64	.64	.63	.62	.62	.64	.64	.63	.62	.62	.64	.64	.63	.62	.62	.64	.64	.63	.62	.62
Eggs, large A	1 doz	.68	.64	.65	.63	.61	1.10	.98	.94	.93	.74	1.10	.98	.94	.93	.74	1.10	.98	.94	.93	.74	1.10	.98	.94	.93	.74
Apples	1 lb	.16	.16	.16	.16	.18	.26	.28	.27	.28	.28	.26	.28	.27	.28	.28	.26	.28	.27	.28	.28	.26	.28	.27	.28	.28
Bananas	1 lb	.20	.19	.20	.19	.20	.34	.34	.36	.36	.36	.34	.34	.36	.36	.36	.34	.34	.36	.36	.36	.34	.34	.36	.36	.36
Oranges	1 lb	.19	.31	.20	.18	.18	.19	.22	.23	.24	.22	.19	.22	.23	.24	.22	.19	.22	.23	.24	.22	.19	.22	.23	.24	.22
Strawberries, frozen	10 oz	.32	.30	.29	.28	.24	.38	.36	.34	.33	.32	.38	.36	.34	.33	.32	.38	.36	.34	.33	.32	.38	.36	.34	.33	.32
Peaches	No. 2½ can	.33	.32	.33	.34	.34	.51	.49	.47	.46	.46	.51	.49	.47	.46	.46	.51	.49	.47	.46	.46	.51	.49	.47	.46	.46
Orange juice	46 oz	.38	.39	.37	.40	.40	.56	.59	.55	.56	.54	.56	.59	.55	.56	.54	.56	.59	.55	.56	.54	.56	.59	.55	.56	.54
Potatoes	1 lb	.06	.05	.06	.07	.06	.08	.08	.10	.10	.09	.08	.08	.10	.10	.09	.08	.08	.10	.10	.09	.08	.08	.10	.10	.09
Carrots	1 lb	.11	.12	.12	.14	.15	.18	.23	.27	.24	.25	.18	.23	.27	.24	.25	.18	.23	.27	.24	.25	.18	.23	.27	.24	.25
Peas	303 can	.21	.21	.21	.22	.20	.29	.28	.30	.28	.28	.29	.28	.30	.28	.28	.29	.28	.30	.28	.28	.29	.28	.30	.28	.28
Pork and beans	16 oz	.16	.15	.15	.15	.14	.23	.23	.22	.21	.20	.23	.23	.22	.21	.20	.23	.23	.22	.21	.20	.23	.23	.22	.21	.20
Coffee	1 lb	.94	1.12	.98	1.02	1.00	.98	1.12	1.00	1.04	1.01	.98	1.12	1.00	1.04	1.01	.98	1.12	1.00	1.04	1.01	.98	1.12	1.00	1.04	1.01
Salad dressing	1 qt	.70	.73	.74	.74	.78	.81	.78	.76	.76	.78	.81	.78	.76	.76	.78	.81	.78	.76	.76	.78	.81	.78	.76	.76	.78
Oleomargarine	1 lb	.31	.32	.31	.29	.32	.38	.38	.37	.35	.34	.38	.38	.37	.35	.34	.38	.38	.37	.35	.34	.38	.38	.37	.35	.34
Sugar	10 lbs	1.09	1.08	1.08	1.11	1.14	1.76	1.52	1.42	1.43	1.47	1.76	1.52	1.42	1.43	1.47	1.76	1.52	1.42	1.43	1.47	1.76	1.52	1.42	1.43	1.47
Jello	pkg	.09	.09	.09	.09	.09	.12	.12	.12	.11	.11	.12	.12	.12	.11	.11	.12	.12	.12	.11	.11	.12	.12	.12	.11	.11
TOTAL		10.56	10.79	10.39	10.47	10.88	13.62	13.39	12.92	12.81	12.86	13.62	13.39	12.92	12.81	12.86	13.62	13.39	12.92	12.81	12.86	13.62	13.39	12.92	12.81	12.86
Per cent of Seattle		100	100	100	100	100	129	124	124	122	118	129	124	124	122	118	129	124	124	122	118	129	124	124	122	118
Per cent of 1953		100	102	98	98	102	100	98	95	94	94	100	98	95	94	94	100	98	95	94	94	100	98	95	94	94

of the three cities reported. In Juneau the price of the market basket in 1953 was \$13.34, or 126 per cent of Seattle. By 1957 it was \$12.86, or 118 per cent. The market basket in Anchorage in 1953 cost \$14.77 (140 per cent of Seattle) and

\$14.32 in 1957 (132 per cent). Of the three cities,

Fairbanks showed the smallest decline during

the five years. In 1953 the market basket price

was \$16.45 (156 per cent of Seattle). In 1957

it was \$16.17 (or 149 per cent).

	ANCHORAGE					FAIRBANKS				
Bread ----- 1½ lb loaf	.37	.40	.44	.46	.45	.46	.49	.48	.46	.46
Ground beef ----- 1 lb	.67	.64	.56	.74	.59	.88	.72	.70	.78	.70
Round steak ----- 1 lb	1.24	1.10	1.10	1.31	1.43	1.58	1.55	1.44	1.45	1.66
Chuck roast ----- 1 lb	.80	.78	.84	.76	.78	1.04	.95	.80	.80	.89
Bacon, sliced ----- 1 lb	.99	1.07	.91	.81	.98	1.08	1.10	.87	.90	1.03
Butter ----- 1 lb	.95	.92	.88	.86	.85	.95	.92	.92	.90	.87
Milk, fresh ----- 1 qt	.40	.40	.40	.40	.40	.53	.51	.47	.47	.47
Milk, evaporated -- 14½ oz	.20	.20	.19	.19	.19	.20	.20	.20	.20	.20
Ice cream ----- 1 qt	.75	.76	.73	.74	.73	.80	.85	.85	.85	.85
Eggs, large A ----- 1 doz	.81	.77	.78	.76	.74	.85	.81	.85	.82	.85
Apples ----- 1 lb	.29	.30	.26	.30	.28	.33	.30	.28	.28	.30
Bananas ----- 1 lb	.45	.40	.40	.44	.39	.47	.47	.46	.48	.48
Oranges ----- 1 lb	.25	.25	.26	.27	.27	.29	.26	.27	.28	.26
Strawberries, frozen 10 oz	.42	.40	.39	.40	.37	.50	.48	.47	.48	.48
Peaches ----- No. 2½ can	.55	.53	.53	.55	.48	.56	.55	.57	.55	.59
Orange juice ----- 46 oz	.62	.64	.61	.65	.60	.66	.67	.66	.69	.70
Potatoes ----- 1 lb	.11	.08	.10	.10	.08	.10	.10	.10	.11	.10
Carrots ----- 1 lb	.26	.28	.26	.27	.29	.33	.36	.33	.32	.30
Peas ----- 303 can	.32	.33	.31	.33	.31	.30	.31	.32	.34	.34
Pork and beans ----- 16 oz	.23	.25	.24	.26	.23	.26	.26	.29	.26	.29
Coffee ----- 1 lb	1.01	1.24	1.06	1.12	1.06	1.07	1.30	1.19	1.19	1.17
Salad dressing ----- 1 qt	.92	.90	.84	.84	.87	.97	.92	.95	.98	.96
Oleomargarine ----- 1 lb	.37	.37	.36	.36	.34	.40	.40	.38	.40	.40
Sugar ----- 10 lbs	1.67	1.64	1.54	1.52	1.50	1.58	1.76	1.76	1.71	1.70
Jello ----- pkg	.12	.11	.12	.11	.11	.13	.12	.13	.13	.12
TOTAL -----	14.77	14.76	14.11	14.55	14.32	16.32	16.36	15.72	15.83	16.17
Per cent of Seattle -----	140	137	136	139	132	155	152	151	151	149
Per cent of 1953 -----	100	100	96	98	97	100	100	96	97	99

The decline of food prices in Alaska is attributed to improved transportation, improved merchandizing, and to larger production within the state. Competition in merchandizing pressed downward on food prices throughout the period.

IMPORTANCE OF MILITARY MARKETS
From 1953 through 1955 approximately 50,000 military personnel were stationed in Alaska. At that time they comprised a quarter of the State's total population. Since then the number of milit-

ary personnel has been reduced, while the civilian population has gone up. From 1953 through 1957, the federal government was Alaska's largest buyer of locally grown potatoes and vegetables. Of 3,200 tons of U. S. No. 1 potatoes sold in the Matanuska Valley-Anchorage area in 1955 the government purchased just over 2,700 or 85 per cent. From 1955 to 1957 the armed forces cut back their purchases of local potatoes by 30 per cent. Government purchases of other vegetables—cabbage, carrots and lettuce—also declined. Part of this decrease was caused by a reduction of troops in the area. The remainder was largely caused by a switch to purchases from "stateside" suppliers.

During this particular 5-year period contracts were generally let on bid for the full marketing season. They were usually awarded in the spring. This permitted the farmer to plan his land use, his hired labor needs, and to obtain necessary operating capital.

Military policy favored local purchase where it was to the advantage of the government to do so. Purchases were deemed to the advantage of the government when prices were competitive, items acceptable in quality were offered, and local supplies were adequate to meet demands. In general, military purchases were made on the basis of short-range objectives, judged primarily on day-to-day savings. While there was some recognition of a need to develop Alaska's food producing industry, military purchases of foodstuffs were not used as a device to encourage local development. In many instances, issuing bid invitations directly to producers generated severe local competition which actually discouraged farm development.

Military purchases of dairy products amounted to 1.7 million dollars in 1955. By 1956 they stepped up to 3 million. Ice cream and cottage cheese purchases increased 138 and 139 per cent, respectively. Well over half of all dairy sales to the military services in 1955 were of reconstituted or recombined milk (powdered milk, anhydrous fat, and water recombined). Powdered milk and anhydrous fats were imported and recombined locally for troop consumption. No local fresh milk was sold for troop messes during this period.

On Kodiak Island the navy consumed approximately 50 per cent of the local beef there in 1955. In the Anchorage area, Fort Richardson and Elmendorf Airforce Base consumed 5.2 million pounds of imported meat that year.

Although Alaska's agricultural potential is large, commercial farming is relatively new. Economic conditions favoring farm development have existed since World War II. Reflecting these favorable conditions, total farm sales increased from \$1,575,000 in 1949 to \$3,300,000 in 1957. The number of full-time commercial farms and their volume of production doubled during this period. Milk production increased four-fold and there was a proportionate increase in the amount of roughage and grains produced. Potato production reached a peak in 1953 and remained near that level for the next few years.

Continued growth of commercial farming is likely. Growth will be determined by the economic development of the state as a whole, by military contracting policies and procedures, by local land policy and development programs, by farm methods, and by the evaluation of processing and marketing systems.