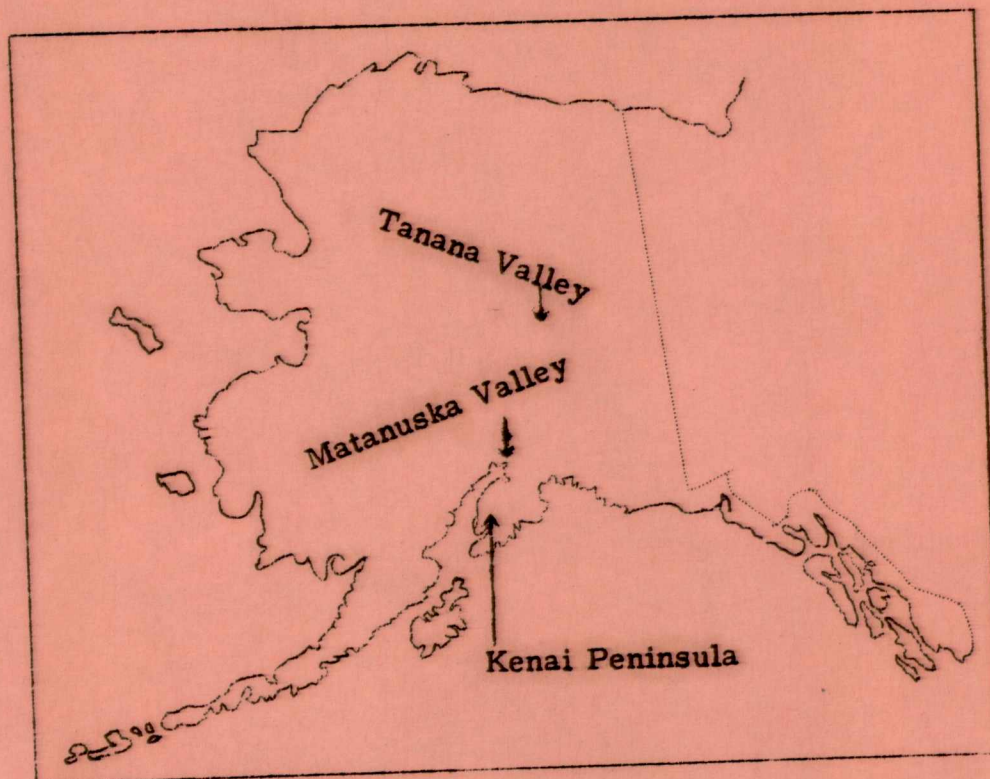


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Mimeograph Circular 4
(For Limited Distribution)

FARMING IN THE ALASKAN RAILBELT

1952



ALASKA AGRICULTURAL EXPERIMENT STATION

Don L. Irwin, Director

In cooperation with the

UNITED STATES DEPARTMENT OF AGRICULTURE

SUMMARY

Over half of the farmers in the Railbelt area of Alaska located on their farms after World War II. Farming on the current scale is so new that it is in a constant state of flux. Changes frequently occur in farm practices and in farm ownership.

Shortage of cropland and inadequate buildings place a temporary ceiling on expansion of major lines of farming in all agricultural areas. Liberal amounts of credit must become available for continuation of the rapid expansion experienced in the past. The major reason why various kinds of agricultural enterprises developed as they have in leading agricultural areas can be found in the history of agricultural settlement.

The Matanuska Valley provided nearly half of the agricultural production in Alaska in 1952. More families were engaged in farming in this valley than in any other area in Alaska. Milk sales topped all others as a source of income and more full-time farmers had dairies than any other enterprise. Potatoes were second in importance with numerous part-time farmers growing varying acreages. Poultry and vegetable production both follow a similar pattern of numerous small producers and only a few specialized farms.

The Tanana Valley was the second most important agricultural area in 1952. Most farmers relied on potatoes for their major source of farm income. Vegetables were grown as a minor enterprise on several farms. Few flocks of hens were found. Although interest in dairy farming has been strong in this area, only 3 farms produced milk in surplus quantities in 1952. Of these 3 farms, one was a public institution, one was exceptionally large, and one was exceptionally small. Lack of housing and domestic water have deterred both dairy and poultry farming.

Compared to the above areas, agricultural development on the Kenai Peninsula has been slow. Farmers have been greatly handicapped by lack of a source of borrowed capital and by distance from a sizable market. Livestock and poultry are the major enterprises. Even though 12 of the 19 farmers interviewed grew potatoes, acreages usually were small. Vegetable production is not great because most of the produce is sold locally and not much produce is demanded by this market. Shortages of equipment necessitate a great deal of hand work.

FARMING IN THE ALASKA RAILBELT

Richard A. Andrews 1/

Agricultural Economist

Agriculture's contribution to the Alaskan economy has increased yearly and now is of major importance. However, several years will pass before this industry is fully developed. More land must be cleared, more working capital must become available to farmers, and adequate and efficient farm buildings must be built before maximum contributions can be realized. In late years, much of the money invested came from the farmer's or homesteader's savings. These investments were either planned or forced. Considering the retarding influences experienced by agriculture, and its extreme youth, development has been rapid and agriculture is well established. Dairying has become the most important source of income on Alaskan farms, potato and vegetable production is second and poultry production is third. For farm expansion to continue, farmers must find a satisfying reward either material or aesthetic for their energies. This study is concerned primarily with the material rewards and was made to find practices for maximizing these rewards. Information also was compiled to provide reliable statistics essential in solving economic problems.

The first Alaskan farm management study was made in 1947. Current yearly studies were begun in 1949. Over 90 farmers were contacted and records were obtained from 83 in the Matanuska Valley in 1952. Due to changing management, rentals and lack of adequate farm records, 15 Matanuska Valley records were of limited use. Eighteen farmers were interviewed in the Tanana Valley of which 4 records were of limited value. General information was obtained from 19 farmers on the Kenai Peninsula.

FARMING IN THE MATANUSKA VALLEY

The Matanuska Valley was the most important agricultural area in Alaska with almost half the total value of agricultural production in 1952 originating there. More cropland was found in the Valley than in any other area. Over half of the milk, vegetables and potatoes produced in Alaska came from there. The Valley's development has been favored by the

1/ The author expresses sincere appreciation to the farmers in the Matanuska Valley, the Tanana Valley and the Kenai Peninsula who gave of their time and resources to make this study possible. Also, sincere appreciation is expressed to the Matanuska Valley Farmers Cooperative Association, to the Alaska Dairy Products Corporation, who contributed factual information on Alaskan production, and to all members of the Agricultural Economic Department for their invaluable suggestions.

availability of marketing facilities, by nearness to market, by more cleared land, and by more sources of capital than is found in other areas.

Milk was the most important source of farm income in 1952, potatoes were second, poultry was third, vegetables were fourth and beef and pork production were fifth. ^{2/} Although the several types of farming can be found almost anywhere in the Valley, certain types were more common in some areas than in others. Twenty-eight of the 38 dairy-men contacted were located in the areas surrounding Palmer and Bodenbug Butte. On the other hand, 15 of the 25 potato farmers interviewed were located south west and west of the Experimental farm. Location of farm types is probably due more to local history of farm development and distance from marketing facilities than to any other reasons.

The major products fall into 2 groups, those of high value per unit (intensive land use) and those where large crop volume can be handled with proportionately smaller amounts of labor (extensive land use).

The Farmers

The age distribution of farmers interviewed in this study in the Matanuska Valley is shown in figure 1. All age groups are well represented: 11 percent were in their twenties, 25 percent were in their thirties, 33 percent were in their forties, 25 percent were in their fifties, 5 percent were in their sixties, and 1 percent was in their seventies. Thirty-one percent of the farmers were 50 years old or more.

Of 38 farmers interviewed, 23 had been on their present farms less than 3 years. Of these, 9 had been in Alaska less than 3 years. Forty-nine farmers have been on their present farms only since World War II. Twenty-four had been on their farms 10 or more years and 16 of these located during the days of colonization. Thus, it can be seen that a high proportion of full-time farmers in Alaska are relatively new to their particular farms--if not to Alaska.

^{2/} Sherman, C. G., Estimated value of farm products produced in Alaska in 1952, Commissioner, Alaska Department of Agriculture, Fairbanks, Alaska, January 15, 1953.

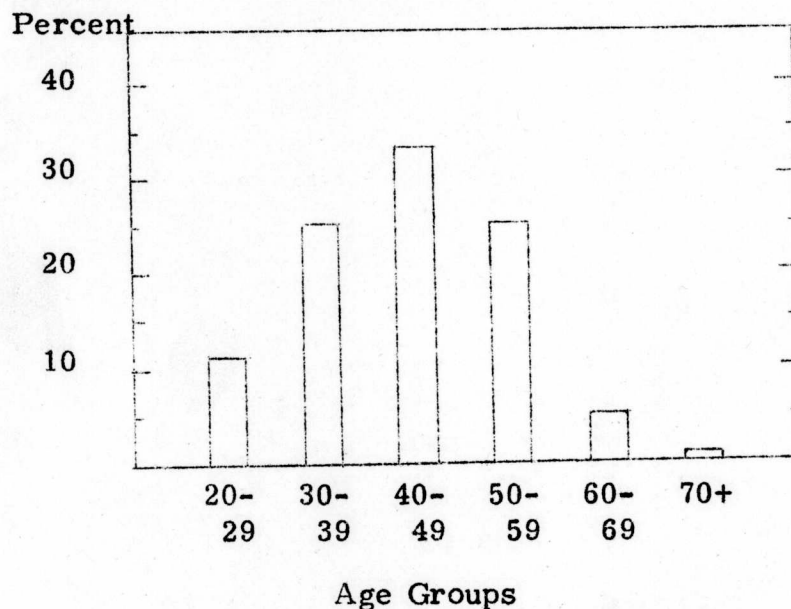


Figure 1. Proportion of farmers in various age groups, Matanuska Valley, 1952.

The Farms

The average size of 81 farms was 194 acres. Fifty-eight acres of these were cropland, 23 were native and woods pasture, 97 were woods not pastured and 16 were in the building site, roads and wasteland (table 1).

Of the 194 acres, 30 acres were rented. Fifty-two of the 81 farmers interviewed rented land and 18 rented out land. Most of the rented land was obtained from individuals who were not engaged in farming in 1952. Those interviewed who rented out land usually did so on some kind of trade or share basis ranging from a share in the crop to just having the land worked. Only 3 farmers rented out land on a cash basis. On the other hand, 29 of the 52 farmers renting land paid a flat charge per acre and 7 other farmers rented some land on a flat per acre charge plus other land on a non-cash basis. Most rates per acre ranged from \$8 to \$20. Other rentals were based on trades of acre for acre, share in the crop, trading work and machinery for land or simply for working the land. Virtually all of the rental agreements were on an annual basis. Eighteen farmers rented land for potatoes, 4 for vegetables, 23 for hay and silage, 8 for grain and 3 farmers rented land for pasture which was mostly native and woods pasture. Several farmers rented land for 2 or more crops.

Nine percent of the cropland was in potatoes and vegetables, 54 percent was in hay and silage, 22 percent was in seeded pasture, and 5 percent was idle and fallow (table 2). Ten percent was used for grain production. This was 6 to 8 percent less than was employed in grain production during the 4 previous years.

Table 1. Average acreage per farm and in specified crops by type of farm. Matanuska Valley, 1947, 1949, 1950, 1951 and 1952. ^{1/}

Item	Type of farm														
	Dairy					Potato					All farms				
	1947	1949	1950	1951	1952	1947	1949	1950	1951	1952	1947	1949	1950	1951	1952
Number of farms reporting	30	27	33	31	38	12	20	23	15	24	78	77	79	46	81
Land use	Average acreage per farm														
Cropland															
Potatoes	3	2	1	1	1	12	10	6	7	11	5	5	3	3	4
Vegetables & fruit	1	1	^{2/}	^{2/}	^{2/}	1	1	1	^{2/}	2	1	1	1	^{2/}	1
Small grain	12	10	¹²	¹⁰	⁷	15	7	4	⁸	6	10	6	8	10	6
Hay ^{3/}	42	25	23	23	25	19	9	10	13	8	26	15	14	20	16
Silage	7	20	22	25	28	--	1	2	1	2	3	8	10	17	15
Green manure ^{3/}	--	--	^{2/}	--	--	--	--	1	1	1	--	--	1	^{2/}	^{2/}
Idle & fallow	1	1	^{2/}	^{2/}	3	5	4	3	4	4	4	4	2	1	3
Seeded pasture	12	14	¹⁷	¹²	21	3	3	4	10	8	6	8	9	11	13
Total cropland	78	73	75	71	85	55	35	31	44	42	55	47	48	62	58
Other land	83	156	139	--	--	129	150	138	--	--	100	137	121	--	--
Native & wood pasture	--	--	--	38	40	--	--	--	35	6	--	--	--	38	23
Woods not pastured	--	--	--	85	97	--	--	--	89	107	--	--	--	86	97
Other	--	--	--	7	17	--	--	--	10	20	--	--	--	7	16
Total land in farms	161	229	214	201	239	184	185	169	178	175	155	184	169	193	194

^{1/} Data for 1947 are from the report by Mimms, O. L., J. L. Paschal and W. U. Fuhrman, Some Economic Aspects of Farming in Alaska, tables 6 and 8, pp. 31 and 34. Values given therein are rounded to the nearest whole number. Data for 1949 and 1950 from Moore, C. A., Farming in the Matanuska and Tanana Valleys of Alaska, table 1, page 8.

^{2/} One-half acre or less.

^{3/} In 1947 crops plowed under for green manure were included with hay.

Table 2. Proportion of farms reporting and proportion of cropland in specified crops by type of farm, Matanuska Valley, 1947, 1949, 1950, 1951 and 1952. ^{1/}

Item	Type of farm														
	Dairy					Potato					All farms				
	1947	1949	1950	1951	1952	1947	1949	1950	1951	1952	1947	1949	1950	1951	1952
Number of farms reporting	30	27	33	31	38	12	20	23	15	24	78	77	79	46	81
Land use	Percent of farms reporting														
Cropland															
Potatoes	60	44	24	35	23	100	100	100	100	100	76	75	61	56	57
Vegetables & fruit	33	22	24	13	2	75	65	70	33	62	50	53	47	20	30
Small grain	60	70	73	74	58	92	65	43	67	46	58	52	56	70	48
Hay ^{2/}	100	93	91	84	^{3/} 95	92	70	87	87	58	87	81	78	85	78
Silage	57	96	97	87	92	—	10	30	13	21	22	42	52	63	54
Green manure ^{2/}	—	—	3	—	—	—	5	13	7	13	—	6	9	2	4
Idle & fallow	17	19	6	3	8	17	55	39	40	42	33	39	25	15	30
Seeded pasture	77	89	91	68	92	50	45	43	40	46	49	68	66	58	60
	Percent of total cropland														
Potatoes	4	3	1	1	1	21	28	19	16	25	9	11	6	5	7
Vegetables & fruit	1	1	—	^{4/}	^{4/}	2	3	3	^{4/}	5	2	2	2	^{4/}	2
Small grain	16	14	16	^{4/}	9	27	20	13	^{4/}	14	18	13	17	^{4/}	10
Hay ^{2/}	54	34	31	32	29	34	25	32	30	20	48	32	29	32	29
Silage	9	28	29	36	33	—	3	7	2	4	5	17	21	27	25
Green manure ^{2/}	—	—	—	—	—	—	—	3	2	1	—	—	2	^{4/}	^{4/}
Idle & fallow	1	1	—	^{4/}	3	10	12	10	9	10	7	8	4	2	5
Seeded pasture	15	19	23	^{4/}	25	5	9	13	23	21	11	17	19	18	22
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

^{1/} Data for 1947 are from the report by Mimms, O. L., et al. *Op. cit.*, tables 6 and 8, pp. 31 and 34. Values given therein are rounded to the nearest whole number. Data for 1949 and 1950 from Moore, C. A. *Op. cit.*, table 1, page 8.

^{2/} Crops plowed under for green manure were included with hay in 1947.

^{3/} Six dairymen grew silage but no hay, and 5 dairymen grew hay but no silage.

^{4/} Less than 0.5 percent.

Dairy farmers operated the largest farms with an average of 85 acres of cropland. Potato, poultry and vegetable farmers followed averaging 85, 42, 26 and 17 acres of cropland respectively. The bulk of the dairy farms contained from 50 to 100 acres of cropland, most potato farms ranged from 20 to 40 acres and the remainder ranged from 5 to 45 acres (table 3).

Table 3. Number of farms having specified cropland acreages by type of farm, Matanuska Valley, 1952.

Acreage per farm	Type of farm					Total
	Dairy	Potato	Poultry	Vegetables	Misc. & Gen.	
	Number of farms					
Less than 5	--	--	1	--	--	1
5 - 19.9	--	5	--	2	4	11
20 - 34.9	2	11	4	2	3	22
35 - 49.9	2	3	2	--	1	8
50 - 64.9	7	3	--	--	--	10
65 - 79.9	7	--	--	--	--	7
80 - 94.9	8	1	--	--	--	9
95 - 109.9	6	--	--	--	--	6
110 - 124.9	2	--	--	--	--	2
125 and over	4	1	--	--	--	5
Total farms	38	24	7	4	8	81

Crop Yields Considerable variation in yields from year to year can be noted among the several crops reported (table 4). Weather conditions at critical times bear tremendous influence. Since yields are reported on a planted acreage basis a heavy cutworm infestation, or high weed population, can mean drastic cuts in reported yields. The growing year of 1952 was a fairly typical year. Potatoes yielded a total of 6.7 tons per acre of which 5.6 tons were No. 1's. An early frost in some sections of the Valley cut average yields slightly. The celery yield of 17.2 tons was the highest of the 3 years reported. Carrots, turnips and rutabagas and lettuce did not yield as well in 1952 as in 1947, 1949 or 1950.

Oat yields of 41 bushels per acre in 1952 were up from averages of 32 to 37 bushels in 1947 through 1951. Wheat was down to a low of 10 bushels per acre with the largest grower experiencing virtual crop failure. Barley yields of 33 bushels per acre were 2 bushels less than the 1951 average but somewhat higher than in 1947-1950. The oat-pea hay yield of 1.4 tons in 1952 was the same as in 1950 and 1951. Since this yield of hay was primarily 1 cutting with the second

Table 4. Average yields per acre on farms reporting specified crops, Matanuska Valley, 1947 ^{1/}, 1949 ^{2/}, 1950 ^{2/}, 1951 and 1952.

Crop	Unit	Average yield per acre				
		1947	1949	1950	1951	1952
Potatoes						
Total	tons	5.2	7.3	7.5	6.6 ^{3/}	6.7 ^{4/}
U.S. No. 1	tons	--	5.5	5.8	5.3 ^{3/}	5.6 ^{4/}
Grains						
Oats	bu.	32.0	37.0	33.0	35.0	41.0
Wheat	bu.	15.0	25.0	20.0	16.0	10.0
Barley	bu.	21.0	21.0	26.0	35.0	33.0
Wheat & oats	bu.	--	--	30.0	--	--
Oat-pea grain	bu.	--	--	41.0	--	49.4
Barley & oats	bu.	--	--	--	44.0	--
Oat-pea hay	tons	1.1	1.5	1.4	1.4	1.4
Brome grass hay	tons	--	--	^{5/}	1.4 ^{5/}	1.0 ^{5/}
Other grass & legumes	tons	--	--	--	1.5	--
Oat-pea silage	tons	5.2	4.6	4.6	4.1	4.2
Carrots ^{6/}	cwt.	4.5	6.5	4.4	--	1.7
Cabbage ^{6/}	cwt.	3.2	7.3	7.0	--	5.2
Turnips & rutabagas ^{6/}	cwt.	--	--	11.3	--	4.4
Lettuce ^{6/}	cwt.	3.2	5.0	6.2	--	3.2
Celery ^{6/}	cwt.	8.8	16.0	--	--	17.2

^{1/} Mimms, O. L. et al., Op. cit., table 9, page 36.

^{2/} Moore, C. A., Op. cit., table 5, page 13.

^{3/} The potato crop on several farms froze, cutting yields on planted acreages. Yield on harvested acreages was 7.7 tons of which 6.6 were U. S. No. 1's.

^{4/} An early frost in August killed potato vines in some sections of the Valley. However, not all producers were included resulting in a slightly biased sample. U.S. No. 1 yields on all farms were close to 6 tons per acre which allows for no shrinkage taken out in listed yield.

^{5/} Brome grass yield reported by only 1 farmer in 1950 are not representative. Yields for 1951 and 1952 represent only 1 cutting, the second crop was pastured or used for silage.

^{6/} Reported on low acreages and listed as yields on planted acres. Weather conditions, insects and weeds cut yield in 1952.

crop grazed or cut for silage, bromegrass dropped 0.4 tons from 1951 to an average of 1 ton per acre in 1952. Oat-pea silage yielded about the same in 1951 and 1952, but still was less than 1947, 1949 or 1950. Higher yields of all forage crops have been reported in previous years indicating that increased yields are possible. In light of the high costs of shipped-in feed and land clearing this is one area where cattlemen can cut costs. Usually a dollar spent for fertilizer will return more than a dollar spent on feed.

Average yields broken down by general areas are shown in table 5. Several differences appear but these are based on only one year and not all acreages were covered in these 3 areas. Table 5 was compiled as an indication of differences that might exist between various areas and not as a measure of those differences. The main difference between areas north of Palmer and south of Palmer is climatic. Potato farmers south of Palmer have a higher weather risk than farmers in most other areas in the Valley. Yields of potatoes north of Palmer and in the Wasilla area were about the same. Data in table 5 indicates that climate or management in the Valley probably are the more important factors contributing to total yield of crops in 1952.

Table 5. Average yields per acre on farms reporting specified crops by general areas, Matanuska Valley, 1952.

Crop	Unit	North of Palmer	South of Palmer and Butte area	Wasilla area	Average yields for Valley
Potatoes					
Total	tons	7.3	4.0 ^{1/}	7.3	6.7
U. S. No. 1's	tons	6.4	3.1 ^{1/}	6.0	5.6
Grain					
Oats	bushels	44.	44.	36.	41.
Wheat	bushels	25.	27.	2. ^{2/}	10.
Barley	bushels	48.	22.	37.	33.
Oat-pea hay	tons	1.6	1.4	1.4	1.4
Oat-pea silage	tons	5.7	4.1	3.6	4.2

^{1/} One farmer had a crop failure and another had extremely low yields, but most farmers in this group produced below average yields of U. S. No. 1's per acre.

^{2/} The largest wheat grower had virtually a crop failure.

Grain Production Forty-eight percent of the farmers interviewed grew small grains on 10 percent of the cropland (table 2). Oats was the most popular small grain accounting for 65 percent of the grain acreage. Barley was second accounting for 27 percent of the acreage. Wheat and mixed grain made up 8 percent of the total. Swedish Select oats were grown on 36 percent of the acreage, Victory on 27 percent, Golden Rain on 19 percent and mixed varieties on 18 percent. Of the barley acreage 72 percent was in Edda, 13 percent in 19B, 9 percent in Olli and 6 percent in others. Khogot was the most widely grown wheat.

The earliest planting of grain was on April 25 and the latest on June 17. Most plantings were made from May 5 to May 30 (table 6). Binding began on August 20 and lasted until October 5, threshing began October 20 and lasted well into the winter.

An average of 8.7 man-hours of labor was used to produce and harvest an acre of grain in 1952. Of this, 6.3 hours, or about two-thirds time was for harvesting and 2.4 hours, or about one-third time was for preparing the ground and planting (table 7). Labor requirements to produce and harvest an acre of grain were the same in 1950 and 1952 but were appreciably higher in 1949 and 1951. However, labor required for planting was much the same in all 4 years. Harvest labor made the difference in requirements over the years. Much of this apparent difference results from the small number of reports involved rather than from actual differences in labor utilization.

Table 7. Labor and tractor hours required per acre to produce and harvest grain, Matanuska Valley, 1949, 1950, 1951 and 1952.

Operation	1949 1/ 1950 1/ 1951 1952 :				1949 1/ 1950 1/ 1951 1952			
	Man hours per acre				Tractor hours per acre			
Pre-harvest	2.1	2.1	2.1	2.4	2.1	2.1	1.9	2.4
Harvest	9.1	6.6	8.2	6.3	1.4	1.0	1.7	1.2
Total	11.2	8.7	10.3	8.7	3.5	3.1	3.6	3.6

1/ Moore, C. A. Op. cit., table 9, page 21.

Tractors were used 3.6 hours per acre. Of this, 2.4 hours or about two-thirds of the time was for preparing the land and planting and 1.2 hours or about one-third of the time was for harvesting the crop. Not over 0.5 hour difference in tractor time has occurred between 1949 and 1952.

Table 6. Labor and tractor hours required per acre to produce and harvest grain by operation, Matanuska Valley, 1952.

Operation	Time of performance			Times over	Size of Crew	Man hours		Tractor hours	
	Earliest	Usual	Latest			Time to perform operation	Ave. all grain fields	Time to perform operation	Ave. all grain fields
Pre-harvest									
Plowing	5/1	5/1 to 5/20	6/1	1	1	1.0	0.9	1.0	0.9
Disking				1-2	1	0.6	0.2	0.6	0.2
Harrowing	4/22		5/26	1-3	1	0.4	0.4	0.4	0.4
Seeding, fertilizing and packing	4/25	5/5 to 5/30	6/17	1-2	1	0.8	0.8	0.8	0.8
Harrowing				1-2	1	0.6	0.1	0.6	0.1
Total pre-harvest						3.4	2.4	3.4	2.4
Harvest									
Binding	8/20		10/5	1	1-2	1.1	1.1	0.7	0.7
Shocking				1	1-4	1.6	1.6	--	--
Threshing	10/20		12/22	1	3-8	3.6	3.6	0.5 <u>1/</u>	0.5 <u>1/</u>
Total harvest						6.3	6.3	1.2	1.2
Total all operations						9.7	8.7	4.6	3.6

1/ Truck hours 1.1 and thresher hours 0.5 per acre.

The average cost of producing grain in 1952 was \$46.16 per acre of which \$20.44 was cash (table 8). These cash costs increased from \$13.95 per acre in 1949 ^{3/} to over \$20.00 in 1952. Part of this increase is due to a rise in cost of seed and fertilizer. In addition, the rate of fertilization per acre has nearly tripled since 1949. Farmers used 113 pounds per acre in 1952 as compared with 40 pounds 5 years before. ^{3/}

Table 8. Fertilizer, seed, labor and power requirements and average cost of producing an acre of grain, Matanuska Valley, 1952.

Expense items	Quantity per acre	Unit cost	Average cost per acre
	Pounds	Dollars	Dollars
Cash items			
Fertilizer	113.0	6.50	7.34
Seed	100.0	8.60	8.60
	Hours		
Threshing custom	0.5	9.00	<u>4.50</u>
Total cash			20.44
Non-cash items			
Labor	8.7	1.75	15.22
Tractor	3.1	2.50	7.75
Truck	1.1	2.50	<u>2.75</u>
Total non-cash			<u>25.72</u>
Total cost per acre of grain			46.16

Equipment and Buildings The equipment trend is toward machines which are of a higher capacity, save labor and make work easier. Twice as many farmers are using track-type tractors as there were in 1949 and 1950 (table 9). The track-type tractor gives better performance on wet soil and a large part of the tractor work is done on wet ground in the early spring and in the fall. A few more farmers reported grain drills, various types of harrows, grain binders, buzz saws and garden planters in 1952 than in 1949 and 1950. Also, in labor saving equipment, more farmers reported potato picker uppers, wagons, trailers and milking machines. An increase in silo fillers and ensilage cutters occurred in 1950 when many farmers added silos. No appreciable change in numbers

^{3/} Moore, C. A. Op. cit., table 10, page 22.

Table 9. Proportion of farms reporting specified types of equipment and buildings, Matanuska and Tanana Valleys, 1949, 1950 and 1952.

Kind	Matanuska Valley			Tanana Valley	
	1949	1/ 1950	1/ 1952	1950	1/ 1952
	Percent	Percent	Percent	Percent	Percent
Equipment					
Automobile	34	39	53 ^{2/}	39	65 ^{2/}
Truck	82	78	86	78	71
Tractor					
Wheel	94	81	95	61	71
Track	4	6	14	17	18
Tractor plows	82	77	79	61	65
Grain drill	40	39	47	22	24
Potato planter	30	27	28	39	41
Harrows					
Disk	61	56	73	72	82
Spring & spike	82	73	88	67	59
Packers	39	33	40	5	12
Wheel hoes	49	37	42	28	18
Cultivators	53	52	42	33	59
Mowers	29	23	26	22	29
Hay rakes	36	26	27	22	30
Silo filler	22	22	17	--	--
Grain binder	43	43	47	11	12
Thresher	5	4	9	--	18
Potato digger	44	39	46	44	53
Potato picker upper	13	14	17	--	18
Manure spreader	29	27	27	11	6
Fertilizer spreader	26	34	33	22	12
Buzz saw	25	18	40	17	12
Wagons & trailers	9	14	36	22	41
Milking machine units	34	32	38	--	--
Garden planters	9	11	14	--	6
Ensilage cutters	--	8	12	--	--
Service buildings					
Barn	87	78	80	17	33
Upright silo	39	42	40	--	--
Trench silo	11	8	14	--	--
Poultry house	74	67	74	22	28
Greenhouse	32	25	22	--	28
Sheds, granaries, etc.	40	46	63	61	33
Garage	17	19	28	17	33
Root cellars	^{3/}	^{3/}	25	^{3/}	56
Machine sheds	^{3/}	^{3/}	10	^{3/}	^{4/}

^{1/} Moore, C. A. Op. cit., table 3, page 11.

^{2/} Including jeeps.

^{3/} No report.

^{4/} Machine storage often in conjunction with root cellars.

occurred from 1950 to 1952. Ten percent fewer farmers reported cultivators in 1952 than in 1949 or 1950, due primarily to the trend toward dairy farming in the Valley. Several new field choppers and hay balers were reported in 1952. There was a slight increase in the percent of farmers reporting trench silos in 1952 over 1949 or 1950.

Equipment inventories have increased nearly \$850 since 1950 ^{4/} (table 10). The 4 primary reasons for this build-up are 1) the high cost of labor, 2) the short time in which to perform most operations, 3) the type of work involved, and 4) the amount and type of machinery previously available.

Table 10. Average capital investments in farm equipment and buildings, Matanuska and Tanana Valley, December 31, 1952.

Capital Investment	Matanuska Valley		Tanana Valley	
	Dairy	Potato	All farms	All farms
Power and equipment				
Highest	14,811	8,896	14,811	9,540
Lowest	1,782	1,610	970	1,700
Average	5,296	4,147	4,587	4,726
Service buildings				
Highest	23,719	17,261	23,719	26,812
Lowest	3,588	75	75	270
Average	8,587	4,522	6,117	4,225

Root cellars were reported on 25 percent of the farms visited. Having storage on the farm saves time during the harvest season. Only 10 percent of the farmers reported machine sheds. However, some of the machinery may be stored in miscellaneous buildings and garages which showed a 20 percent increase in 1952 over 1949 or 1950. With the increase in specialization fewer greenhouses were reported on farms in 1952.

^{4/} Moore, C. A. Op. cit., table 4, page 12.

Dairy Farming In The Matanuska Valley

Nearly half of the gross farm income in the Matanuska Valley was from milk sales. Dairying is the most popular type of farming on the full-time farms. It does not readily lend itself to off the farm employment.

Thirty-eight dairy farmers were interviewed but due to changes in management and in enterprises, several interviews were of limited value. The average size of dairy farms was 239 acres of which 85 acres were cropland, 40 acres were native and woods pasture, 97 acres were woods not pastured and 17 acres were of other land. The range in cropland on the 38 farms was from 27 acres to 175 acres with two-thirds of the farms having between 50 and 100 acres. Since 1947, the proportion of cropland in forage crops has increased about 2 percent each year (from 76 percent in 1947 to 87 percent in 1952).

The 35 dairy farms on which detailed information for the entire year was obtained had an average net return from farming of \$3,732. The range was from a loss of \$5,270 to a net gain of over \$12,200. The most outstanding difference between those farmers receiving less than \$4,000 and those receiving over \$4,000 was in average milk production per cow. The latter produced and sold over 2,000 pounds more milk per cow than did the former. Numbers of milk cows exerted influence on net returns from farming. Farmers carrying herds of 13 to 20 cows netted over \$1,100 more than did farmers carrying 12 cows or less.

For more detailed information on dairy farming in the Matanuska Valley in 1952 see Dairy Farming in the Matanuska Valley, A. A. E. S., Mimeograph Circular No. 5.

Potato Farming In The Matanuska Valley

The Matanuska Valley led all other areas in volume of potato production in Alaska during 1952. Over 3,500 tons were produced. Of the 81 farmers interviewed, 46 grew from 0.5 to nearly 20 acres of potatoes. Twenty-four of the 46 farmers grew potatoes as their enterprise specialty.

The average potato farm contained 175 acres. Forty-two acres per farm were cropland, 6 were native and woods pasture, 107 were woods not pastured and 20 were in other land (table 1). Potatoes were produced on 25 percent of the cropland, vegetables on 5 percent, small grain on 14 percent, hay and silage on 24 percent, green manure on 1 percent, seeded pasture on 21 percent and 10 percent, which was mostly newly cleared, was left fallow or idle.

Average returns from potato farming on the 24 farms were \$3,446. The range was from a loss of \$5,489 to a net of \$8,958. When these potato farms were divided into 2 groups according to high and low returns, those having over \$4,000 of net income obtained a much higher yield of U. S. No. 1's than those having less than \$4,000 incomes. Yields were of 6.8

tons per acre and 4.4 tons per acre respectively. This was the major difference between these farms. Acreage planted was nearly the same in both groups.

Because several of the farmers with large acreages experienced poor yields, farmers growing over 10 acres of potatoes netted little more than farmers with less than 10 acres. For more information on potato production see Potato Farms in Alaska, A. A. E. S., Mimeograph Circular No. 6.

Vegetable Farms

Although 30 percent of the farmers interviewed reported some vegetable production, only 4 of the 81 farmers derived over half of their gross farm income from vegetable sales and could be classified as vegetable farmers. Relative to other crops, smaller acreages of vegetables are needed to supply the market and high per acre returns are realized. Only 2 percent of the cropland on the 81 farms visited was devoted entirely to vegetables. On the 4 vegetable farms, 45 percent of the cropland was in vegetables, 27 percent was in potatoes, 22 percent was in hay and 6 percent was idle. The average size of vegetable farms was 74 acres of which 17 were cropland, 47 were woods not pastured and 10 were in the building site, farm roads and wasteland.

Lettuce, among the vegetables, led as a source of gross income to Matanuska Valley farmers. Cabbage was second and was followed by carrots, celery, rutabagas and turnips, and radishes in that order. ^{5/} Lettuce and cabbage sales accounted for over two-thirds of the gross income from vegetables other than potatoes.

One of the 4 vegetable farmers leased his farm but the other 3, owning their farms, had an average of \$3,742 invested in service buildings. Only 1 of the 4 had a root cellar, 2 reported packing sheds, 1 had storage buildings and 3 reported greenhouses. The average investment of the 4 in machinery was \$3,290. All 4 reported trucks, tractors and harrows of one kind or another. Three had vegetable washers and vegetable or garden planters.

All 4 of the farmers located on their farms since the war and only 1 has been on his farm for 6 years.

Hired labor costing \$2,218 was the largest expense item on these farms. It accounted for 1/4 of total expenses. Although all 4 farmers were married, only 1 had children over 10 years old at

^{5/} Estimated value of farm production produced in Alaska in 1952.
Op. cit.

home to help with farm work. Vegetable production is notorious for its labor. Only dairy farms required more productive man work units 6/ per farm with 334 as compared with 281 on vegetable farms.

The hazards of vegetable farming are great. Loss of part of a crop occurs frequently. In such hazardous farming, returns must be high to compensate for the risk of loss. Average net returns of \$8,297 on these 4 farms exceeded the average in any other enterprise group.

Detailed information on cabbage production was obtained from 6 of the 81 farmers interviewed. All 6 grew Golden Acre, 2 grew it exclusively and the other 4 grew additional varieties including Ballhead, Bonanza, Glory of Enkhuizen, Early Flat Dutch and Copenhagen Market. In 1952, weather was the major peril of production; insects and disease were reported of minor importance. Late plantings and forage-consuming wild animals also were causes of reduced yields. Plantings began April 15 and lasted through a late transplanting on July 5. The date of planting depends upon when the grower plans to sell his crop. Harvesting began August 1 and lasted into October. Seeding rates ranged from 1/2 pound to 2 1/2 pounds per acre and fertilizer from 400 to 1,500 pounds per acre. Cabbage was grown in rotation or was planted on new land. More labor was required for transplanting, thinning (when planted from seed), weeding and hand hoeing, and for harvesting than for other operations.

Poultry Farming

Poultry flocks usually are small and generally are a minor enterprise on Matanuska Valley farms. Approximately half of the income from poultry was from meats and half from eggs on all farms in the Matanuska Valley. Although 56 percent of the 81 farmers interviewed had flocks on December 31, 1952 only 7 received over half their farm income from this enterprise. Average egg production per bird in 19 flocks was 151 eggs as compared with 145 in 1950 and with the U. S. comparable figure of 145 in 1951. The flocks on the 7 poultry farms on December 31, 1952 ranged in size from 180 to 1,200 birds and averaged 556 birds.

The average poultry farm included 142 acres, 26 acres of this were cropland, 5 were native and woods pasture, 107 were woods not pastured and 4 acres were in farm roads, building sites, and wasteland. Thirty-five percent of the cropland was in small grain, 31 percent was in hay, 23 percent was idle, 5 percent was in potatoes and 6 percent was in seeded pasture. All of the

6/ One productive man work unit represents 10 working hours. Stateside conversion factors were used in computing the productive man work units used in producing crops, livestock and livestock products on these farms.

cleared land on 2 of the poultry farms was idle and only 1 poultryman raised potatoes or vegetables. Three had milk cows, young stock and beef animals. Labor efficiency was poor as measured by productive man work units varying from 112 to 259 per farm and averaged 186. Poultry farms had not yet reached an efficient size of operation for full-time farming.

The 7 poultrymen had an average investment in equipment of \$3,932. Trucks were reported on all farms; tractors (either wheel or track) were on 6 farms, grain drills and grain binders were reported on 3 of the farms. Potato planters, packers, plows, wheel hoes, rakes, threshers, potato diggers, potato picker uppers, manure spreaders, fertilizer spreaders, buzz saws, fanning mills, egg graders and automatic waterers were reported on 1 or more farms.

The average investment in buildings was \$5,887. Four of the 7 farmers had more than 1 poultry house which creates a problem of efficient use of labor. A lot of time can be spent traveling from one flock to another and to sources of feed. Several farmers, however, are trying to center their birds under 1 roof or in a group. Four reported barns and 6 others reported other buildings of various types.

All but 1 of the poultry farmers were married and 3 had 1 or more children over 10 years of age at home to help with the farm work. Two had been on their farms only 1 year, 1 for 2 years, 2 for 4 years and 1 each for 5 and 6 years.

Complete expense and income data was obtained from 5 of the 7 poultry farms. Feed cost of \$4,653 was over half of the total cash expense of \$8,445. If both scratch and mash were purchased, poultry feed would have averaged over \$8 per hundred pounds or over \$160 a ton. The average feed cost amounted to \$0.66 per dozen eggs produced or \$8.08 per bird carried at the beginning and ending of the inventory year.

Total income received was \$9,319 of which \$7,156 was for egg sales, \$1,040 was from potato sales, \$490 was from poultry meat sales and \$633 was from other farm sources. The net return from farming was \$1,683 of which \$707 was value of production used in home consumption.

Information on how the laying flock was handled was obtained from 12 flock owners. Eight of the 12 carried over from 20 to 338 laying birds for a second year of lay, 2 carried none over and 1952 was the first year in poultry production for the other 2 farmers. Straw for litter was used exclusively by 8 poultrymen, 2 mixed straw with sawdust, 1 used only sawdust and 1 mixed peatmoss and sawdust. Built-up litter was used by 8 of the 12 but was changed annually. Another farmer

changed his litter twice a year. The other 3 changed litter 4 or more times a year. Two had automatic waterers, 4 piped water into the house but only 1 could use it year round. The remaining 6 carried water to the henhouse all year. Two had electric units for heating water in the winter. The use of lights in the winter is necessary and poultrymen use from 33 to 150 watts per 100 birds. Seven used from 40 to 60 watts and 4 used over 60 watts per 100 birds. Five used lights for a 13 hour day, 1 for 13 1/2 hours a day, 4 for a 14 hour day and 2 for a 15 hour day. All but 1 of the poultrymen who purchased chicks for replacements obtained sexed chicks, mainly from Outside hatcheries. Most of the replacement chicks were obtained between March 25 and June 15. These birds would start laying in October, November and December giving rise to temporary surpluses on the market until the marketing channels could be swelled to handle all the eggs. A temporary surplus actually occurred in December, 1952. Three families collected eggs once a day, 2 gathered them twice a day and 7 three or more times a day. One collection a day is not quite adequate under many conditions that exist. All but 1 of the poultrymen moved their eggs to market 2 or more times a week. The Co-op was the main buyer for 8 of the 12, 3 sold most of their eggs to stores and 1 sold directly to consumers, restaurants and others. Floor space per bird varied from a low of 1.25 square feet to 4 square feet, with 9 of the 12 allowing between 1.7 and 3.0 square feet per bird. One poultryman used cages.

The most common infectious diseases were leukosis and coccidiosis but only 3 farmers mentioned these as major causes of mortality. Prolapse (blowouts) and predatory animals were reported by 7 of the 12 poultrymen as the major causes of mortality. The other 2 reported either no loss or negligence as the cause of the loss. High winds, which are common during winter months, were reported to cut egg production. At times the flocks were thrown out of production for a week or more and then never fully recovered.

General and Miscellaneous Farms

Three general types of farmers fell into the miscellaneous group; those living in semi-retirement, those with full-time jobs where farming is done primarily for family subsistence with small sale of surpluses, and those just getting started in farming.

Only 23 of the 141 acres per farm on these 8 farms were in cropland. Three cropland acres were in potatoes, 1 was in vegetables, 2 were in small grains, 8 were in hay, 5 were in silage, 2 were idle and 2 were in seeded pasture. Six farmers had milk cows and miscellaneous young stock at the end of the year and 5 had poultry flocks. No single enterprise contributed heavily to farm income. Potatoes brought in the greatest return and, at the most, meant an average of only \$737 to farm income. The average net return from farming was a loss of \$203. The largest expenditure was \$1,879 for machinery but this is reflected in increased machinery inventory.

FARMING IN THE TANANA VALLEY

The Tanana Valley area is second in importance in agricultural production valued at about a fifth of the income from farm sales in Alaska. It is one of the "older" agricultural areas, having started at the turn of the century during gold rush days and has seen boom and bust periods prior to the current defense prosperity.

Although only 3 dairy herds were in production in 1952, milk sales topped all other products as a source of farm income. More farmers were engaged in potato farming than in any other enterprise. Crop sales, particularly potatoes, were the most important source of income to the largest number of farmers.

Most farmers were of 2 age groups, those from 30 to 39 and those over 50. Only 1 farmer was in his forties and 1 in his twenties. Five were bachelors, 3 were married but had no children at home and 10 were married with 1 or more children at home. Only 13 farmers had family labor to help with growing and harvesting the crops. One had been in Alaska less than 2 years and 5 had been on their farms 2 years or less. Seven of the 18 farmers interviewed had been on their farms 7 or more years.

Equipment and Buildings High labor costs emphasize the need for adequate equipment. Tanana Valley farmers have been increasing their equipment inventories for more efficient operation. More farmers reported tractors, potato picker uppers, in 1952 than in 1950 (table 9). Equipment for harvesting grain (a thresher and a combine) has been obtained since 1950. Efforts on the part of several farmers to enter dairying are reflected in more roughage-handling equipment. More farmers reported barns and root cellars in 1952 than in 1950.

Land Use Land clearing in many parts of the Tanana Valley is a long-time proposition varying with the kind of land cleared. Lowlands require 2 to 3 years after clearing to thaw out and warm up. Slopes usually are planted to a green manure crop before the first cash crop. In 1952, 10 of the 18 farmers cleared 100 acres. The average was nearly 6 acres per farm visited.

The average area operated by the 18 farmers was 162 acres consisting of 39 acres of cropland, 1 acre of native and woods pasture, 109 acres of woods not pastured and 13 acres of wasteland, farm roads, and building sites (table 11). Twelve of the 39 acres of cropland were in potatoes, 1 was in vegetables, 5 were in grain, 4 were in hay and 4 were in seeded pasture. Thirteen acres, 1/3 of the cropland, was in a process of soil conditioning being planted to green manure crops or lying idle and fallow to warm up for crop production.

Table 11. Average acreage per farm and in specified crops by types of farm, Tanana Valley, 1949 1/, 1950 1/, and 1952.

Item	Type of farm						All farms		
	Potato			Others			1949	1950	1952
	1949	1950	1952	1949	1950	1952			
Number of farms reporting	10	9	13	3	4	5	17	18	18
Land use	Acres per farm								
Cropland									
Potatoes	13	10	16	--	--	1	8	5	12
Vegetables & fruit	1	2	2	1	2	1	3	3	1
Grain	--	2	4	4	--	6	1	1	5
Hay	3	1	3	9	8	7	4	3	4
Green manure	2	5	9	7	1	1	2	3	7
Fallow & idle	12	9	6	5	14	7	9	11	6
Seeded pasture	3	--	4	--	--	3	3	1	4
Total	34	29	44	26	25	26	30	27	39
Other land	134	207	--	146	216	--	129	198	--
Native and wood pasture	--	--	1	--	--	--	--	--	1
Woods not pastured	--	--	119	--	--	85	--	--	109
Other	--	--	17	--	--	2	--	--	13
Total land	168	236	181	172	241	113	159	225	162

1/ Moore, C. A., Op. cit., page 17, table 7.

Crop Yields Average yields in the Tanana Valley fluctuate from year to year. Variations in weather conditions during the year comprise one of the major risks borne in this area. An early frost in August 1952 cut yields considerably. Only 3.5 tons of U. S. No. 1 potatoes were harvested per acre as compared with 5.2 tons in 1950 and 3.3 tons in 1949 (table 12). Cabbage, turnip, rutabaga and lettuce yields were somewhat lower in 1952 than in 1949 or 1950. Oat-pea hay yields were 1.6 tons per acre in 1952 which was highest of the 3 years concerned. Grain yields were obtained for the first time and the oat yield of 40 bushels per acre was the same as the Matanuska Valley average. Wheat yields in the Tanana Valley exceeded the Matanuska Valley by 3 times, and barley averaged 4 bushels less per acre in the Tanana Valley than in the Matanuska Valley.

Potato Farming

Potatoes were the main source of farm income on most farms in the Tanana Valley in 1952. The frost in August reduced yields on some farms; but, even so, the net farm income of \$4,019 on potato farms here was about \$600 more than potato farmers received in the Matanuska Valley. Prices of things farmers buy are 5 to 10 percent higher in the Tanana Valley than in the Matanuska Valley.

Table 12. Average yield per acre on farms reporting specified crops, Tanana Valley, 1949 ^{1/}, 1950 ^{1/}, and 1952.

Crop	Unit	Average yield per acre		
		1949	1950	1952
Potato				
Total	tons	4.2	6.9	4.4
U. S. No. 1	tons	3.3	5.2	3.5
Grain				
Oats	bushels	--	--	40.0
Wheat	bushels	--	--	36.0
Barley	bushels	--	--	29.0
Oats-barley	bushels	--	--	60.0
Oat-pea hay	tons	1.2	1.4	1.6
Grass hay	tons	--	--	1.0
Cabbage	tons	8.0	7.6	4.8
Turnip & rutabaga	tons	--	5.0	3.4
Lettuce	tons	--	4.8	1.4

^{1/} Moore, C. A., Op.cit., table 5, page 13.

The average size of the 13 farms visited was 181 acres. Forty-four acres per farm were cropland, 1 was native and woods pasture, 119 were woods not pastured and 17 acres were in farm roads, building sites and wasteland. An average of 16 acres of potatoes were planted per farm. The range in cropland was from 4 to 40 acres.

Vegetable production was the most important minor enterprise. Seven of the 13 potato farmers reported 0.75 acres or more of other vegetables. Only 4 farmers had roughage consuming animals and 2 had poultry.

Detailed information on potato farming in the Tanana Valley can be found in Potato Farms in Alaska, A. A. E. S. Mimeograph Circular No. 6.

Other Types of Farming

Dairy farming has been confined to only a few herds in the past but several farmers are interested in establishing dairies. Many obstacles have prevented dairy farm development. The domestic water shortage is critical and thousands of dollars have been spent on dry holes. Even when water is available, dairy buildings must be built at considerable expense. Financing is difficult. Private capital is in short supply and an adequate source of borrowed capital is non-existent. Shortage of cropland has been a problem for some farmers but in 1952 this was much less important than previously. One part-time farmer managed to begin production in 1952 with a December 31 inventory of 4 cows, 4 head of young stock and a bull. These were the only milk cows on farms included in the sample.

Poultry flocks are few and usually are small in size. Only 1 of the 18 farms was primarily a poultry farm and another had chicks to begin a laying flock enterprise. In previous years, the poultry farms have been short-lived, but since these 2 farms have facilities for raising part of the grain, they have a better chance for permanency. One of the major problems has been in maintaining a satisfactory rate of lay throughout the year. Only 2 other farms had laying flocks during the year. Poultry meat production is centered around home use or is utilized in some associated business.

Most of the vegetable growers were mainly potato producers. There were several small truck gardeners, however, who were not interviewed. Less cropland is needed to supply the local market with vegetables than is needed by other crops. However, the volume of vegetables sold could be increased by providing adequate storage. One producer lost most of his crop due to lack of proper storage.

Production information was obtained from 3 cabbage growers. Plantings, including transplanting and direct seedings, occurred from May 15 to June 9. From 600 to 700 pounds of fertilizer were used per acre. Cultural practices included thinning, cultivating, hoeing, weeding and watering. Harvesting began the middle of August and lasted well into October.

Very little grain has been threshed in the Tanana Valley in recent years primarily due to absence of threshing equipment. In 1952, ample equipment became available. Information was obtained from 5 farmers who grew a total of 7 acres of oats, 29 acres of barley and 22 acres of an oat-barley-pea combination. The 7 acres of oats were of the Golden Rain variety and were seeded at about 80 pounds per acre. Nine acres of barley were Edda and 17 were Olli. Seeding rates ranged from 50 to 100 pounds. Only 1 of the 5 farmers spring plowed, the other only disked. Three farmers planted during the first 10 days of June, 1 planted on May 18 and 1 on June 27. Early plantings yielded the best in 1952. Two farmers combined their grain on September 16 and 19, the others reaped theirs between August 15 and September 10.

FARMING ON THE KENAI PENINSULA AREA

Most of the agricultural production on the Kenai Peninsula is locally marketed or home consumed on the Peninsula. Some eggs, beef and potatoes reach Anchorage but Seward was the principal market outside the production area. Milk sales were the greatest single source of farm income in 1952 but few farmers were engaged in milk production. More farm families had egg sales, the second most important source of gross farm income. Vegetable farming ranked third since 12 of the 19 farmers interviewed grew a few potatoes. Beef production was fourth in importance and 4 farmers had herds of 8 to 9 mature cows plus heifers for herd increases and replacement.

Farm development has been slow on the Peninsula and most enterprises are too small for efficient operation. Homesteaders have been hampered by laws unsuited to the area, by limited sources of capital, and, most important, by lack of an adequate market and marketing facilities.

Of the 12 potato growers, only 4 had an acre or more of potatoes in 1952, and several of them were unable to sell their whole crop. A factor contributing to poor sales is the lack of marketing facilities. For example, a store manager on the Peninsula was not able to purchase local potatoes for resale in the latter part of the marketing year. However, local potatoes were available at the time.

Vegetables other than potatoes usually amount to less than an acre per farm. Seven of the 19 farmers had poultry flocks of more than 50 birds and another raised about 5,000 broilers, fryers, and roasters in 1952. The largest laying flock contained 1,000 hens and the next largest were of 430 and 250 hens. Four had 100 hens or less. Although 4 or 5 farmers sold milk, only 2 had more than 5 milk cows on December 31, 1952.

Agricultural Development

A follow-up was made of 47 homesteading families interviewed by Richard E. McCurdy in 1950 summarized in the bulletin "Agricultural Possibilities of Alaska's Kenai Peninsula". These families were selected on the basis of farming intentions and only those who were farming or indicated they might farm were included. Of the 47 only 19 were farming on either a part-time or a full-time basis, 12 had sold out or moved away (or both) and 16 were not farming for other reasons (table 13). The 19 who were farming were practically the number reported in 1950 as farming. However, several families had moved into the area since 1950 and were farming on new homesteads or had taken over land previously homesteaded so that there had been a small but not appreciable increase.

Table 13. Summary of activities of 47 families who, in 1950, indicated they would farm, Kenai Peninsula, June, 1953. ^{1/}

Area	Total	Farming			Not farming for other reasons
		on same scale	Sold out	Moved away	
Homer	21	10	3	5	3
Anchor Point	2				2
Ninilchick	9		1		8
Kasilof	8	5		1	2
Soldatna	7	4		2	1
Total	47	19	4	8	16

^{1/} McCurdy, Richard E. and Hugh A. Johnson, Agricultural Possibilities of Alaska's Kenai Peninsula, Alaska Ag. Expt. Sta. Bul. 13, March 1951.

There are 3 major areas of agricultural development; the Homer-Ninilchik area, where most of the beef is produced; Kasilof, where part-time retirement farms are common; and the Soldotna-Kenai development made up mostly of World War II veterans.

The Farmer

Seven of the 19 farmers have been on their farms more than 6 years. Five of these 7 have been on their farms for 10 years or more. The remaining 12 moved to their farms since the end of World War II. Nine arrived on the Peninsula since World War II and 5 have been in the Territory 6 years or less, including length of service in the Armed Forces. Hence, most of those engaged in farming in 1952 were relatively short-time residents in Alaska. There is a wide disparity in the age of farmers, mostly as a result of the war and homestead laws. Eight farmers were between 30 and 40 years old and 9 were 50 or more years old. Normal age distribution would put the greatest incidence from 40 to 50 but only 2 operators were in this age group. Three-fifths of the operators were married and had 1 or more children at home.

Farm Characteristics

Buildings and Equipment Most farmers were fairly well equipped for livestock production but were very poorly equipped for potato and vegetable production. Seventeen of the 19 had at least 1 wheel or track type tractor, 16 had plows, 14 had 1 or more harrows, 12 had mowers, 9 had rakes, and 1 family in the Homer area had a field chopper. Hay hoists were reported by most farmers having cattle. No grain drills were reported on these farms but 1 small 4-foot drill was available in the Homer area. Potato diggers and planters were scarce, only 1 farmer reported a digger and no one reported a planter. However, a planter and another digger were available in the area. Most of the farmers planted and dug their potatoes by hand. Four garden planters and 3 garden tractors were listed.

Farm buildings were generally inadequate. Crop farmers were the best off and the cattle raisers the worst off for establishment of economic-sized farm units. Additional buildings, requiring generous financing are necessary for satisfactory growth of most farms in the area.

Land Use and Yields Land use information for 1952 was obtained from 16 of the 19 farmers interviewed. Most of the cropland was used to produce forage. Of the 312 acres of cropland on all 16 farms, 12 acres were in potatoes, 2 were in vegetables, 1 was in small grains, 139 were in hay, 73 were in silage (reported on 5 farms), 14 were idle and 66 acres were in seeded pasture. A total of 60 acres of native hay was used by 7 of the 16 farms and 594 acres of native and woods pasture were used on 11 farms. The yield of native grass decreases each year of use and usually its decline is greatest during the first 3 years.

Farm size varied from 26 to 230 acres with an average of 139 acres per farm. Most farms had more land that could be broken but the sod is reported difficult to break.

The average total yield of potatoes was 6.3 tons per acre. Most growers reported usual yields of 6 tons of U. S. No. 1's. In 1951, 1 farmer raised 10 tons of No. 1's per acre under favorable conditions. Cabbage yields of 8 tons per acre, rutabaga yields of 10 tons and carrot yields of 6.6 tons were reported.

The average bromegrass silage yield was 3 tons per acre and oat-pea silage 3.5 tons. Oat-pea hay yielded 1.2 tons per acre, tame grass hay 2 tons per acre and native hay 1.2 tons per acre.