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Project Report  
(For Limited Distribution)

**NOTES ON**

# **Marketing Perishables from Fringe Areas of Western Canada**

**1951**

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**DON L. IRWIN, DIRECTOR**  
**PALMER, ALASKA**

IN COOPERATION WITH THE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH ADMINISTRATION

ALASKA AGRICULTURAL EXPERIMENT STATION  
UNIVERSITY OF ALASKA

In cooperation with  
UNITED STATES DEPARTMENT OF AGRICULTURE

Office of the Director  
Palmer, Alaska

November 19, 1951

Dear Friend:

The attached copy of my report to Director Irwin is being sent to you either because you helped me gather the information or because I think you will be interested in the results of my trip.

I am very sorry that the Alaska component of the total study cannot be made — but, I hope interested Alaskans will apply the summary of Canadian experiences to our marketing problems here.

Very truly yours,

*Hugh A. Johnson*

Hugh A. Johnson  
Agricultural Economist

HAJ:mt  
Enclosure

NOTES ON MARKETING PERISHABLES  
FROM FRINGE AREAS OF WESTERN CANADA  
1951

Hugh A. Johnson 1/

INTRODUCTION

Since the inception of commercial agriculture in Alaska, there has been a steadily growing knowledge that marketing problems on the frontier differ appreciably from those being experienced in settled Stateside communities. Current marketing research in the States is conducted under conditions which make the results there of limited use in analysis of the Alaskan scene.

Early in 1951, it was suggested that western Canada had many conditions of isolation and sparse settlement similar to ours in Alaska. Therefore, a project "Marketing Problems of Isolated Agricultural Communities" (AL-1-5-3) was drafted and received official approval. The objective of this project was "to study effective and proven methods of reducing collection, processing and distribution costs common to small agricultural communities located at some distance from market".

The procedure outlined a 2-year project. The first season was to be spent in studying the vegetable marketing organization of small communities in western Canada. The second season was to have been spent in detailed analysis of Alaskan marketing facilities with recommendations for improvements. The field work for the Canadian phase of the project was carried out in a whirlwind trip to points in western Canada during the summer of 1951.

Completion of the Alaska phase of the project is extremely doubtful due to budget adjustments in the Alaska Experiment Station and in its Department of Agricultural Economics. The Economics staff has been reduced from three to one man, and this remaining man will be kept busy with higher priority work.

It seems desirable, therefore, to reproduce a running narrative covering observations made during the field trip. Perhaps, at some later date, the detailed analysis of Alaskan marketing conditions can be made and the study completed. Considerable information covering soil types, weather and climate, economic surveys and other data on communities visited were collected and are on file. This information would be of little additional value to the present intent of this narrative report and, therefore, has not been included.

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1/ Agricultural Economist, Alaska Agricultural Experiment Station. Grateful appreciation is expressed to those many Canadians who gave freely of their time and talents to help me understand their marketing situation and to get around in the several communities visited.

NARRATIVE REPORT

I left Anchorage on June 14, and the flight to Juneau was uneventful. From Juneau to Ketchikan we flew through rain and low clouds, stopping for a moment at Petersburg and Bell Island Hot Springs near Ketchikan. The boat harbor at Wrangel was closed that day because the waves were too rough for the Ellis Flying Boat.

Like most southeastern cities and villages, Ketchikan is huddled against the mountains with its main street directly connected with the wharf. The rainfall of nearly 160 inches per year and the mild climate makes for lush growth, but also makes for what would appear to be uncomfortable living conditions. Most of the buildings are on pilings and water runs everywhere.

Visits to collect price information in several stores in Ketchikan showed that prices in that city were nearly as high as in Palmer. This is surprising, since, the boat haul from Seattle to Ketchikan is roughly half the distance from Seattle to Anchorage. Furthermore, boat service between Seattle and Ketchikan is frequent. Shopkeepers had no plausible explanation for this condition, but one suggestion was that stores inland on the Alaska Railroad benefited from a joint boat-rail rate nearly as cheap as the water rate from Seattle to Ketchikan. Historically, water has been the cheapest mode of transportation. Consequently, the preceding explanation does not appear to make sense on the surface 2/.

It was manifestly evident on every hand that the eyes and minds of Ketchikan businessmen were turned to Seattle conditions rather than northward to the main part of Alaska. There was absolutely no indication that Ketchikan was a potential market for any product of Alaska farmland from the interior of the Territory.

While I was in Ketchikan, I visited Mr. Walter Stuart, one of the regents of the University of Alaska. As you know, Mr. Stuart is an engineer by training and vocation, and his only interest in agriculture lies in getting a fair and efficient administration of the agricultural phases of the University. I was able to answer several pertinent questions relative to agriculture in the Territory generally, and passed by others of a policy making nature. He mentioned the publicity given the drive by M.D. Snodgrass, to get a separate school of agriculture located at Palmer. While I agreed with Regent Stuart that the idea was impractical, probably, I pointed out several impractical aspects of the present setup at College. These hinged around the idea that the educational work and the administration of agricultural programs are seated 400 miles from the nearest current active agricultural community.

Mr. Stuart also mentioned that for a while in 1951, Ketchikan stores had sold Canadian milk shipped from Prince Rupert. Shipments suddenly were cut off and local people were given no explanation for the action. Mr. Stuart mentioned further that there was serious dissatisfaction with the quality, quantity

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2/ A check on rate schedules in the Anchorage office of the Alaska Steamship Company shows that their grocery rate covering canned fruits and vegetables is 80¢ per hundredweight from Seattle to Ketchikan while the joint water-rail rate from Seattle to Anchorage for the same items (4th class) is \$2.67 LCL and to Palmer is \$2.98 LCL.

and price of local milk. The Canadian milk seemed satisfactory in every detail and consumers were disturbed when it disappeared from the market. I was able to explain to Mr. Stuart the special interest pressures that were involved and the "sanitary" regulations that were invoked to freeze out the Canadian product.

### The Prince Rupert Area

The trip from Ketchikan to Prince Rupert was made by the Canadian Pacific cruise boat the "Princess Kathleen". I had planned to leave on Saturday morning for a daylight trip down the coast, but due to a change in schedules, the boat left at midnight and I saw little of the area until we were practically at Prince Rupert. The islands near Prince Rupert appeared to be much the same as those further north, being possibly somewhat lower and having less snow but the same forest cover.

Following the wartime flurry of activity, Prince Rupert had dropped back to its pre-war status of a small, fishing and supply center. Everything but restaurants, newstands, and churches were closed up tight under the Canadian Blue laws. This was in distinct contrast to Alaskan cities which really come awake over the weekend.

In a previous memo, I outlined something of the drive being made by the Alaska Development Board for a large power project in southeastern Alaska. This would have been for the development of electricity for use in manufacture of aluminum. The Canadians did not agree to these plans, and are going along with developments of their own which centralize around Prince Rupert. The Celanese plant is a huge development about 5 miles out of Prince Rupert and this corporation was moving construction workers from its Prince Rupert project to a development project near Terrace. The Alcan people (Aluminum Company of Canada) were building about 40 miles of highway during the summer of 1951 to open up the country between Terrace and the project. Men were being bussed part way and flown part way to the camp. This project includes clearing off timber, building dams, and constructing power facilities for industrial use. Canadians seem to feel that this part of western Canada is on the verge of a tremendous industrial boom. A boom psychology prevails at least as far east as Edmonton.

The tradesmen at Prince Rupert were sociable and willing to talk, although they had little concrete information to offer. Mr. Allan Sheardown, who manages the Northland Dairy for his family, talked about the milk situation. The Sheardowns had a small plant, but were building a larger one in the basement of a store building. Raw milk is shipped from farmers around Telkwa and Smithers, then bottled at the plant and sold for 28¢ per Imperial quart which is roughly 20 percent more than our quart.

This is the dairy which was sending milk to southeastern Alaska two years ago. Mr. Sheardown very definitely felt that he had not been given a fair deal by Alaskans. The Alaska Board of Health apparently sent inspectors to British Columbia where they looked over the dairy farms, inspected that plant and made various rulings that forced the Northland Dairy off the Ketchikan and Juneau wholesale markets. However, the dairy still sells considerable milk on direct

consignment to individuals and reported very satisfactory results and relations with those individuals. Mr. Sheardown reported that approximately 180 quarts a week were moving to the Ketchikan market in the summer of 1951. They would have liked to capture the Alaska trade, but had stopped trying in view of recent developments in the British Columbia area. The Columbia Celanese Corporation and the Alcan project apparently will be big business and the Sheardowns hope they will be able to tie up the milk market for those projects.

The Northland Dairy now supplements local milk supplies with pasteurized milk shipped in from the Fraser Valley. Mr. Sheardown reported that they repasteurized this milk and bottle it for local sale. With their new plant at Prince Rupert and another at Kitimat, if necessary, they may have to depend on reconstituted milk to supply the potential market. They expect local supplies from the interior, mainly Telkwa and Smithers areas, to increase slightly but nowhere near sufficient to meet indicated needs.

Prince Rupert grocery stores very obviously were handling American produce. Most of this comes up the coast from Seattle by boat, although I was told the service was not too good. Rail facilities are slow and connections very round about.

The Northern Produce Company was recommended to me as the one produce wholesaler trying to deal in local products. Mr. Syd Thompson very graciously discussed supply problems encountered by his company. Northern Produce handles what it can get from reputable growers, but the volume is not steady. Local fruits and vegetables comprise a very small percentage of the needs for that area.

Another problem in using local produce is that farmers fail to harvest when products are of the proper size. Housewives want a 4 to 5 pound cabbage and not over a 4 pound turnip, with similar limits on their requirements for other vegetables such as potatoes, celery and so forth. They have had difficulty with wireworm in local potatoes. Mr. Thompson believes that agriculture in the interior will increase with the increased market, but sees larger shortages due to the increased demand and greater competition for local products due to increased transportation from the south.

Rail freight rates are a serious problem in Prince Rupert. Since the last war they have increased 15 percent and the Canadian National Railway is now negotiating for another 10 percent increase.

It was my definite impression that any industrialization of the Prince Rupert area will have little positive effect on agricultural production of this region. On the contrary, most able-bodied rural people will be attracted into industry by the high wages, the shorter working hours, the better working conditions and the other considerations which go with an industrial economy.

I left Prince Rupert at 8:30 P.M. on Monday via the Canadian National Railway. Prince Rupert is on the seacoast end of a branch running over from Jasper. As such, its crack train is a local running 3 times a week. This train averages

25 miles per hour from Prince Rupert to Jasper. For the first 2 or 3 hours, we would run a few miles and stop at an Indian village or a logging camp located along the shores of the Skeena River. The train arrived in Terrace, a small logging town of about 3,000 population, something after midnight.

### The Terrace Area

The city of Terrace is 96 miles up the Skeena River from Prince Rupert. The trading center is smaller than that of Palmer and it is my impression that the entire trading area is smaller than that of the Matanuska Valley. The Canadian National Railway is the major mode of transportation, although river traffic formerly was important. The highway from Prince Rupert to Prince George is narrow, crooked and very rough. As with most Canadian highways, little subbasing was done and the road is breaking down under the heavy traffic of the logging industry. Logging is the major industry in the Terrace area and logs and/or lumber probably would be the largest source of income to the Canadian National Railway from Terrace. Agricultural production is largely in vegetables namely, potatoes, turnips, carrots and cabbages. A few berries are grown. Terrace is close enough to the coast to feel the effects of the modifying Japanese current which explains the former importance of orchards in this community. Although storms are rare, disasterous ones will occasionally occur indicated by the wind which knocked down all large timber a few years ago. Temperatures generally are mild, but occasional serious freezes occur such as the one which killed orchards a few years ago.

Previous appointments with members of the Board of Trade at Terrace had been made by correspondence from Alaska. Mr. Duncan Kerr, who owns sawmills, garages, and other interests, spent some time with me and then he introduced Mr. Harry King, a retired farmer, who was to show me the community.

Our first stop was at Frank Brothers Dairy about 2 miles west of Terrace. Mr. Ivan Frank said that their farm has been built up slowly over the years. It was started by their father and the two sons, now middle-aged, took over about 5 years ago. They milk about 20 cows and have about 20 heifers coming along. Their cows are fairly wellbred Holsteins and Guernseys. Besides the two brothers, there is one steady man paid \$180 per month plus house, milk and vegetables; an hourly hand paid 90¢ per hour; and a dairy maid who helps with the milking. One of the brothers spends most of his time delivering bottled milk. However, the volume of work for their size of herd does not seem sufficient to require this amount of labor.

The Frank brothers grow a mixture of timothy and clover for hay and pasture although they hope to get into alfalfa and bromegrass when their land has all been limed. They grow oats for grain. The crops I saw on their farm were definitely second class and are not indicative of potential, prosperous agriculture.

Available pasture is a limiting factor on the Frank brothers expansion at present, although the barn also must be rebuilt. A loafing barn is being considered. They tried grass silage 2 or 3 years ago and found the handling

too difficult with the equipment they had. Their land is generally sandy with some clay mixture in spots and is rather droughty. Mr. Frank reported that they usually get from 1 to  $1\frac{1}{2}$  tons of hay per acre and oats range from 60 to 70 bushels. Already by late June, their crops were indicating lack of fertility and lack of moisture.

All land in this area is deficient in all elements. Soil tests indicate need for  $\frac{1}{2}$  tons of limestone per acre and heavy applications of N, P and K. The Frank brothers have used about 150 pounds per acre of a 6-30-15 prepared mixture shipped from New Westminster, where there is a smelter. The Franks found that they could save about \$20 per ton by buying their ingredients and mixing their own fertilizer.

They hired about 30 acres cleared 2 years ago under a government land clearing program. From all indications, the equipment apparently was just like what we use. The stumps, brush and tree trunks were pushed into windrows which had been burned once since. It cost \$60 per acre to pile these materials and will cost at least another \$60 to break up the windrows and repile. The cover in this area is a mixture of cottonwood, birch and aspen probably not over 6 inches d.b.h. (diameter breast high). This particular area was logged off less than 10 years ago following a heavy local windstorm which knocked down all large standing timber.

Mr. Harry King and Hamlin and Thompson are farmers representative of the older element of the area. They are elderly, are individualists, have very definite ideas concerning potential markets but have sold a good quality of product and have market outlets not open to the field run of farmers.

All three of these elderly men appear to have a Board of Trade outlook and talked about anticipated industrial developments as a sure market for local products. At the same time they complained bitterly about the small current market and difficulties experienced in selling their farm products. Individual orders are too small together with, storekeepers tend to buy from too many farmers, too many people are growing the same crops and quality is not uniform. Several years ago this community had experienced poor results with a farmer's marketing cooperative. Although they sent produce up and down the railroad from Prince George to Prince Rupert, the overall market was too small, each grower's share was too small and the cooperative soon broke down through the resulting bickering.

There has been a small post-war movement of Dutchmen into the Terrace area. Of the approximately half dozen families, Peter von Stock probably is the best educated and seems to be the best established. He has two greenhouses for tomatoes, besides growing tomatoes, beans and corn outdoors. He indicates leanings toward being a gentleman farmer although he seems to feel that there is a good future for his kind of enterprise in the Terrace area. So far, he has been handicapped by lack of funds due to capital export restrictions from Europe.

Several of the larger producers, including some of the Dutchmen, are planning to operate an informal cooperative with an unpaid manager, (to start with) in



an effort to deal with the Provincial Home for the Aged and the Columbia Cellulose Corporation. Neither of these agencies will deal with the small producers but have indicated willingness to buy all possible local items if they can get adequate quantities.

Another Dutchman, Willem Appledorn, brought his family to Terrace in 1949. In Holland he had been a prosperous dairy farmer but he wanted to get out of Europe and believed the recruitment literature he received from colonizers in Canada. While he did not mention it locally, he told me that he was extremely disappointed in the Terrace area and in the opportunities he found there. However, like most modern immigrants, he had less than \$500 cash when he arrived so his opportunities were limited. The available land for rent was weedy and run down. In spite of this handicap, he seems to be making out fairly well. He has 6 children, of whom at least 2 sons work out for wages. Since he has the old European attitude that children are children until they are 21 and that their wages belong to the family, this may be an important factor in his apparent success. The son's wages may be a primary source for buying the new truck, the tractor and the cattle he now has. Appledorn, however, is a good worker and is ambitious in his own right. He wants to get back into the dairy business as soon as possible. In the summer of 1951 he had 3 cows and several heifers, 4 or 5 brood sows, a few hens and a horse. His present rented acreage was too small and scattered to provide hay and pasture for his cattle and he feared that he would have to butcher some this fall. He has the garbage contract from the Provincial Hospital and feeds his hogs on waste. He mentioned that boars are hard to get and that his sows dropped very small litters this year. He needed about 20 small pigs to utilize the Hospital garbage but was unable to get them in the Terrace area.

In addition to his livestock, he grows about 20 tons of potatoes that sell for about \$3.50 per hundredweight and sells strawberries, corn, beans, turnips, lettuce, carrots and other small truck as he can. It was very evident, however, that he is not a truck farmer at heart and that he will not be satisfied until he gets back into dairying. He also indicated that he was quite certain his children would not be satisfied with the hard work of growing truck crops. He hopes to leave Terrace as soon as he can rent or contract for an established farm. He can see little future in the Terrace area because land clearing costs are too high, soil fertility is low, and developing a farm would take too long.

The Terrace area has had several very good apple orchards with a few plum and cherry orchards. The extremely cold winter of 1949 killed most of the trees and seriously damaged the remainder. To date, there has been no apparent effort to replant.

Outside some of the relatively young Dutch immigrants, there was no evidence in the Terrace area that the younger men were taking up agriculture. Lumber prices currently were very good and all the able-bodied men were in the woods in capacities running from teamsters or catskinners to swampers or jack-leg mill operators. Much of the lumber turned out by the small, private operations was of such poor quality and indifferent grade that planing mills were able to make good margins reworking the materials for market.

The Omineca Herald of Friday, June 8, 1951 says: "Twenty cars of logs a day or approximately 250,000 feet of timber is being shipped daily from the Terrace area by rail to the Watson Island plant, with expectation that when under full production 50 carloads of spruce, hemlock and cedar will go from this area."

I talked with Mr. J.A. Smith, a grocer in Terrace, who was reported to have handled most of the local produce in earlier years. He indicated that all the stores in town tried to handle all the local produce they could. Perishables were very hazardous because the market was small and farmers had a tendency to cut the market out from under the grocer. He indicated that farmers should specialize on carrots, turnips and potatoes which can be stored and marketed over a longer period. He also thought that the farming future of the Terrace area depended on a few Dutch families who would stay in agriculture and probably would stay in vegetables.

#### The Smithers-Telkwa-Houston Area

Smithers, a small city on the Bulkley River, about twice the size of Palmer, was reached after an overnight trip on the CNR, even though the mileage was approximately 150. The District Agricultural Agent is located in the Federal Building and the Experimental Farm is located about 5 miles east from town. Mr. Ken Jameson is the District Agent and Mr. W.T. Burns is the officer in-charge of the Experimental Sub-station. Both men were very helpful in selecting persons for me to see and helping me to see the area.

Mr. Jameson took Mrs. Stella Gummo of the women's Institute of British Columbia and me to see the Driftwood-Glentana Community. This is an area northwest of Smithers, settled about 20 to 30 years ago. There appears to be little new agricultural activity since that time. Following World War 1, farmers settled in areas previously burned, cleared their land and seeded timothy. For several years they made a relatively good living on hay, timothy seed and some cattle. No crop rotations were followed and I was assured that many fields never have been plowed or the timothy sod broken since the first planting. Present farming activity seems to consist of cutting badly run out timothy hay, raising a few cattle or sheep and eking out a fair subsistence. The men talk a lot about farm problems, but reject modern agricultural methods quite successfully. Several fairly large places have been sold, abandoned, or reverted to the Crown for tax title. Where places have changed hands, the new owner usually is connected with the lumbering business and bought the place mainly for residential purposes.

The next day, Mr. Burns took me to an area about 8 miles east of Telkwa where we attended a surplus cattle sale at the Green brothers dairy farm. As with the Frank brothers of Terrace, this place was developed by the father and the sons simply drifted into management. There are four brothers who operate between 50 and 60 cows and retail milk in Telkwa and Smithers. They also ship some milk to Sheardowns at Prince Rupert. The sale of young stock was poorly attended and the prices were disappointing. (I have these, if you are interested in seeing them.)

They told me that they get 20¢ per quart for their retail milk (Canadian quart) and currently were being paid \$5.42 for 3.9 percent butterfat milk from Sheardowns. Freight is 89¢ per cwt leaving \$4.53 as their price at the Telkwa depot.

The Telkwa community probably has a dozen smaller dairy farms also sending milk to Sheardowns. Dairymen in this community feel that Sheardown's price is too low and are looking for some way to force it higher. The Green brothers reported that their R.O.P. test runs about 3.9 and they are regularly paid for 3.4 - 3.5. Other dairymen at the sale reported that same situation. No constructive program for change has been made, but in the meantime little expansion in dairying is occurring.

The Telkwa area is a typical example of need for cooperative action to force a change. In their case, it might be done through the Telkwa Cooperative Creamery, through use of the area marketing laws or through an appeal to the Department of Agriculture. Currently, however, the Telkwa Co-op is reported to be losing money monthly, to have a very poor manager, and has little standing in the community.

The Telkwa Cooperative Creamery actually is privately owned by two men. They are reported to be ineffectual operators and their business amounts to very little. Reports were that they handle about 15,000 pounds of milk per month. They need 30,000 to stay in business. Most milk is shipped in the raw state to various small towns up and down the railway. A considerable quantity goes as far as Prince Rupert.

The Telkwa area seems to be adapted to livestock production if farmers would follow a few rudimentary and relatively cheap modern agricultural practices. The hillsides have been burned over until the cover is relatively light and comprised of poplar and spruce interspersed with open spaces. Probably a quarter to a third of the area is in open fields of runout timothy, clover and alfalfa. The soil is a sandy loam, rather shallow, with rock out-croppings in spots or with a clay hardpan a few inches below the surface. This condition makes the soils somewhat grouchy. Conversely, in the spring breakup, the topsoil has a tendency to "flow" downhill. Patches of 2 to 3 acres have been known to slip for several feet when the topsoil is in this saturated condition.

As is general through this area, practically no effort has been made to maintain fertility or crop yields. Hay or timothy seed has been cut in season and the men spend considerable time in the woods. Hourly wages are good and many farmers can use their horses on skidding work. Others even operate small sawmills. Most of the fields I saw are badly infested with dandelions which sap ground moisture in the early spring and leave insufficient moisture to make a respectable hay crop. Over a several year period, timothy yields have run about 1 ton per acre. Average yields of other crops were estimated as: 1,200 pounds of oats, 1,500 pounds of barley, 1,200 pounds of spring wheat and 1,500 pounds of fall wheat. Those few farmers using fertilizer apply about 100 pounds of ammophos for forage crops and 75 pounds of ammophos for grain. This fertilizer comes from a smelter at Trail. The agriculturalists claim that increased quantities of fertilizer could be used profitably, but practically all farmers find a variety of excuses for using none. A combined order of 30 tons of ammophos was marketed in the Smithers area in 1951.

The Smithers-Telkwa area was as nearly comparable to that of the Matanuska Valley as any I located in my travels. Rainfall and range in temperatures were identical with ours at Palmer, but the length of growing season was only 60 days. Very frequently light frosts will occur in any summer month. This condition largely discourages production of potatoes and other less hardy vegetables. If the market were available, and the alternative opportunity of woodwork were not so lucrative, the area would be a natural for dairying or beef production. As it is, however, there probably is little prospective increase in agriculture for this area in the foreseeable future.

On Saturday we travelled about 45 miles east of Smithers to the settlement of Houston. There is a Dominion Demonstration Farm located on the river flat south of the village. This farm, operated by a young Dutchman, was showing serious effects of the drought which caused so much loss throughout British Columbia this year.

Several Dutchmen in this area have started a small produce cooperative. The unpaid manager, Norman Groot, is a small general farmer and manages the produce cooperative on a fee basis. In 1950, the cooperative did \$7,000 of business in potatoes, turnips, cabbages and carrots. They stay away from succulent items because their market is too limited to handle the required volume to do business. The members grow crops which can be stored and are trying to get everyone to grow the same variety. They all have good farm storage and the Coop has a small space too. Mr. Groot emphasized the importance of having a uniform grade and the difficulty of getting uniformity without the same varieties where small acreages are grown. They try to get members to use uniform fertilizer applications to further standardize the product. They also encourage members to harvest when crops are of a merchantable size. Large cabbages and turnips will not sell. Potatoes sold for \$40 to \$50 per ton in 1950 and yielded 4 to 5 tons of merchantable stocks per acre. The cooperative retained 10 percent of the sale price: 4 percent goes to the manager, 1½ percent to the bookkeeper, ½ percent is saved for incidentals and 4 percent is held back as surplus to cover bad debts and other items. They try to pay farmers about 30 days after shipment, since they bill once a month.

These farmers are trying to diversify, but they are poor livestock men and their soil did not appear to be adapted to grain and hay production.

The land grows good potatoes most years, but summer frosts and drought are regular hazards. The community was hard hit in 1950 by serious floods and cold weather and in 1951 had a cold dry spring and summer frosts. The hay crop would be short and grain would be doubtful.

We talked with two other Dutchmen one directly south of Houston who was on drouthy soil and his crops looked bad, the other was north of Houston and had been flooded out when the dikes broke this spring. The one flooded out was reported to be a good truck farmer but would have nothing to do with Mr. Burns and me. The one being dried out was a dairyman, and he was worried about his roughage and grain supply for the winter. Alfalfa and clover made a good start on his farm but the drought was curling the leaves very seriously.

### The Vanderhoof Area

From Smithers I took a daylight train trip 150 miles further east to Vanderhoof. I arrived at 4:00 P.M. and shortly after checking into the hotel, Mr. Frank Hutton the superintendent of the Dominion Experiment Station at Prince George invited me to attend a district Farmer's Institute meeting being held that evening in Vanderhoof. Then he told me that I would be expected to give a talk following Mr. Harry Bowman, Minister of Agriculture for British Columbia. The meeting was attended by approximately 100 representatives from communities in north central British Columbia.

Vanderhoof was Mr. Bowman's home constituency and he is a very popular figure with people of this community. He seemed to have no particular message for them but was roundly applauded anyway. My talk followed his immediately, and I gave the usual "hands across the border" type of presentation. It went over well enough so that Mr. Bowman rose again and extended an official welcome to me on behalf of the British Columbia government.

Vanderhoof lies in a broad river valley; its soils are largely lacustrine and therefore very heavy. The potential farm land lies well, being fairly level and in large plots. However, the soils are extremely hard to work because of the clay-like texture. Land clearing costs run from \$25 on light bush to \$50 on poplar-aspen ranging 10 to 12 inches d.b.h. These estimates are for cutting and piling only; burning, picking roots, breaking and leveling probably will run at least another \$25. The Provincial Department of Agriculture feels that clearing costs running over \$50 per acre are not economically feasible at the present time. They will not encourage any farmer or settler to go into heavy cover. Because of the heavy soil, practically no truck crops are grown. Oats, barley and fall wheat are grown for cash; alfalfa, sweetclover and grass mixtures are grown for hay and seed. There are several fairly large beef farms in this area. So far as I could find, there was only one commercial dairy to supply milk for the town. Small amounts of grain are shipped from Vanderhoof. Hay finds a ready market in the lumber camps. Some hogs are fed and a half dozen farmers run a few sheep. Less than a carload of wool was produced in the spring of 1951. The District Agriculturalist after considerable effort, was able to get 2 carloads of beef cattle together for a shipment last fall. The farmers have a small, second-rate, buying cooperative in Vanderhoof.

Because this is a livestock and grain producing area, marketing is a seasonal problem and I gleaned little information of help on the Alaska situation. About 5 miles from Vanderhoof is a 320 acre farm owned and operated by Mr. Andros. His farm probably is more productive than most in the community. His 6 year crop rotation is as follows:

1. Sweetclover (one crop of hay plowed down and seeded to winter wheat)
2. Winter wheat fall plowed
3. Oats seeded to a brome-alfalfa-alsike mixture
4. Hay
5. Hay (second crop fall plowed down, seeded to winter wheat or occasionally oats and sweetclover)
6. Oats and sweetclover (prefers oats for a cover crop).

He runs from 25 to 30 shorthorn cows and sells the steers at about 18 months of age. Herfords are more common in the Vanderhoof area but Mr. Andros prefers the shorthorn breed. He also keeps 3 to 4 sows and raises about 45 pigs to 190 pounds apiece. He keeps about 300 laying hens. In normal years, this farm will winter 50 to 60 head of beef cattle on the 320 acres. He has 250 acres cleared and uses a brome-alsike-alfalfa mixture for his permanent pasture. Timothy is seeded on the low land.

Oats and barley normally yield about 1 ton per acre, fall wheat 30 bushels, alfalfa  $1\frac{1}{2}$  tons the first cutting and 2 tons on second cutting, sweetclover 2 tons and other hay 1 ton per acre.

Soils in this area are extremely hard to work due to their tendency to puddle. Therefore, a livestock-grain economy appears to be the indicated type of permanent agriculture. Northwest of Vanderhoof approximately 25 miles considerable homestead activity has occurred in the past few years. The timber cover, however, is sufficiently heavy that little agricultural clearing has occurred. The major source of income lies in forest activities with a small amount of part-time farming on tracts where timber has been cut off or a fire has gone through. The Vanderhoof area is a deficit agricultural community.

#### The Prince George Area

Prince George is 72 miles further east from Vanderhoof and is a kind of junction point in the highway and rail system of British Columbia. At Prince George, as with the other places previously visited, I found very little agricultural marketing being done. The farmer's cooperative is controlled largely by two very conservative members. Mr. Charles Fyfe, manager of the Bank of Commerce, reported that the co-op's assets are about 5 times their liabilities whereas the liabilities actually should be somewhat more than assets in a livewire business. So long as this condition exists, the cooperative will not expand.

When I visited the cooperative, Mr. Fyfe's statements assumed added meaning. It was quite evident that the store was a consumers' cooperative and very small. Even so, the selection was extremely limited and seemed to be of mediocre quality. A very small supply of feed was in sight. The co-op receives a few eggs, but handling charges are so high that poultrymen with flocks of any size prefer to market their own eggs.

A few farmers are growing small acreages of potatoes for local sale. The market is in town or in the lumber camps. No commercial acreage of vegetables was noticed.

Mr. George Hays, the District Agriculturalist, reported that several dairy herds were being sold. The price of beef was good, the price of hay was high and the hay crop in 1951 was short due to the drought. Since the landholder could sell all available hay to camps at good prices and could work for \$12 to \$15 a day in the woods or in the planing mills, there was little incentive to stay in dairying. There were reported to be 40 logging camps within a radius of 20 miles from Prince George.

Most of the fresh milk used in the Prince George area was coming from Quesnel or from the Fraser Valley one to two hundred miles outside Vancouver.

Most of the cultivated soil in the Prince George area is a heavy clay with poor drainage due to the hardpan, and low in organic matter and plant food. For some reason unknown to local agriculturalists, better soils in the river bottoms have been passed up in favor of hillside and upland soils. Another area of loam soils lying between Prince George and Nuka Lake was left because it was heavily wooded and was too far from town.

A local slaughter plant in the Prince George community would be successful if properly managed. However, the current manager of the small slaughterhouse already there is reported to drink so heavily that he is untrustworthy. He cannot get loans necessary to make improvements required for government inspection. Although this area produces good market cattle, it is hard to get a carload at any one time and therefore freight costs are excessive. The District Agriculturalist tries to help cattlemen pool shipments whenever possible.

Mr. Frank Hutton and his staff at the Experiment Station were very cordial and showed me over the farm. It is located on heavy clay and puddling is a serious problem. I believe the soil is of the Nuka series. The station has been in operation for about 10 years and their crop yields are as follows: oats, barley and spring wheat about 1 ton per acre; clover and timothy hay  $1\frac{1}{2}$  tons. They formerly followed a 6 year rotation recommended and insisted upon by the Dominion Office. This consisted of:

1. Summer fallow
2. Oats seeded to timothy, alsike and red clover
3. Hay
4. Hay
5. Hay or pasture
6.  $\frac{1}{2}$  oats and  $\frac{1}{2}$  barley

They prefer a 4-year rotation because they need the organic matter in the heavy soil. They like to put their manure on hay land to plow under. The rotation currently being recommended is as follows:

1. A cereal, spring sown or seeded
2. Alsike seed or hay
3. Alsike and timothy hay
4. Alsike and timothy hay.

They have observed no difference among the cereals as a nurse crop. Wheat is least competitive and has a finer leaf, therefore is preferred on their particular tract.

Mr. Hutton and the other agriculturalists recommend not less than 60 acres of cropland for a subsistence farm and about 100 acres for a 15-head dairy herd in the Prince George area. Mr. Hutton mentioned that men of this area do not like dairying, since it takes too much labor that could be earning good money in the bush. He also commented that several dairymen had sold their herds for meat, would sell their hay to lumber camps and had arranged to work in the woods or mills themselves. On Dominion Day, the Canadian national

"Fourth of July", Mr. Hayes took me to Quesnel to visit the manager of the Cariboo Valley Cooperative. We found Mr. Leonard on his farm but ready to leave for the celebration. However, he spent a few minutes to discuss produce marketing problems of their area.

The Cooperative has a closed seed area for potatoes and their North Cariboo Seed is popular with southern growers. They have storage for 700 tons of Netted Gems and an additional 700 tons are held in farm storage. They grade and ship by carload. There are no serious insects or diseases affecting potatoes, although "itches Broom" occurs fairly frequently.

Beside potatoes, the Cooperative will handle cabbages, onions, carrots, turnips-- anything that will store. They refuse to handle perishables because of the risk involved but have no objection to their members growing and marketing perishable vegetables for themselves. An interior wholesaler handles some perishable vegetables for them and Kelly-Douglas Wholesale Company, a local wholesaler dealing with the lumber camps of the area, has a working relationship with the Cooperative whereby the purchaser places his order with Kelly-Douglas, Kelly-Douglas calls the Cooperative and the purchaser picks up his supply at the Co-op storage. In this way, Kelly-Douglas takes a smaller mark-up than would be otherwise necessary and the Cooperative is able to capture a larger net return. This integrated relationship has worked very well in this small community because the Co-op and Kelly-Douglas managers know and respect each other.

The small city of Quesnel has two dairy plants, Northern Dairies Company Ltd. and the Cariboo Dairy Farmers Cooperative which is separate from the Cariboo Valley Cooperative. The Dairy Co-op started handling fluid milk in the spring of 1951. They had the feeling that \$3.75 for 3.5 milk being paid by Northern Dairies was too low. Mr. Leonard has the impression that the farmers cooperative will make progress. It handles a 16 percent dairy feed retailing for \$3.55. Some farmers feed this alone, others grind their own barley, wheat and oats.

The Cariboo Valley Cooperative has a fairly significant egg department. Their eggs are mixed Leghorn and New Hamp but there is no price reduction for mixing. They also handle the Massey-Harris line of farm machinery and operate their own shop for setting up machinery. Their mechanic also does some repair work but shop returns do not pay for themselves. Benefits arise through a reduced price on some of the machinery and in having machinery available for farmers when needed. The mechanic works in the vegetable storage in the off season. In fact, all of the staff must be ready and willing to move around from job to job throughout the plant. Practically all of the repairs, new construction, remodelling, and handling of inventories is done with regular staff at times when not needed for their specialized occupation.

Mr. Leonard commented that the Cooperative utilizes rail freight rates in figuring local prices. The freight rate on eggs, for example, is 2¢ per dozen



from Vancouver to Quesnel. Therefore, the Cooperative pays the Vancouver producer price plus 2¢. They then candle and grade eggs, cool them if necessary and store small quantities for short periods for an average of 5¢ per dozen. All eggs are sold locally while milk is used locally or moves northward to Prince George.

In 1950, the Cariboo Valley Cooperative did \$325,000 worth of business, had 240 members and operated on a cost of 5¢ on the dollar of overall business. Patrons must be members to earn patronage dividends but non-members are allowed to patronize the store.

Mr. Leonard feels that their cooperative is in a fairly strong position. Reasons for this include: (1) their management has been better than average (their regular managers have been selected from outside the cooperative, although for short periods between regular managers a local member has had to assume this responsibility.) (2) they pay excellent wages for this kind of business (3) the trends of the times have been upwards since the cooperative was founded. This latter factor has tended to prevent losses which might have occurred through otherwise poor business judgement.

Dividend payments vary for each item. In 1950, these were: 1 percent on vegetables shipped out, 3 percent on vegetables sold locally, 7 percent on machinery, 3 percent on merchandise (feed, hardware and heavy hardware), 2 percent on eggs.

Our next stop was at a demonstration farm 20 miles south of Quesnel. The operator has about 85 pure bred Angus cows. The size of enterprise is limited by feed supply which he is trying to overcome by changing from a 8-year crop rotation to one of 6-years. The new rotation includes grain, row crop, grain and 3 years of hay.

On July 1st, this farmer was putting up alfalfa hay. It was the best looking crop I had seen on my travels but probably would not run over 2 tons per acre in the best spot and not average more than 1½ tons. Although most of his cropland was flooded late in the spring, all of his grain was only a foot tall or less and was heading out. Indications were that he would have a very poor crop due to the severe drought. Experiment Station fertilizer trial plots showed no results so far on that date because of the drought. Nor were there any outstanding differences in the variety tests.

For his row crop, this farmer grew a certified seed potato for sale to southern growers. He has an excellent record for disease free stock. It is my impression that he is growing Netted Gems and is included in the closed seed area of Quesnel.

We returned to Prince George late that evening and the next morning I enplaned on the Canadian Pacific Airline for Vancouver by way of Kamloops.

### Vancouver and the Fraser Valley

The stop at the University of British Columbia to meet Professor W. A. Anderson and Mr. E. D. Woodward was very interesting but was disappointing in the scanty information I could gather. Both men apparently were well acquainted with agricultural conditions in western Canada, but had had no experience with marketing phases in the small fringe communities in which I was interested. One day they took me up the Fraser Valley to see the agricultural development near a ready market. Many of the farms were large and very intensive, but I was surprised to note the number of very run-down places. Evidently, the original farmstead was too small for modern type operations or in some cases the original farmstead had been broken up to satisfy heirs. At any rate, operators no longer could provide an adequate living from the farm and were either running down its fertility or were renting out the cropland and working off the farm.

The next day we went to visit the Western Peat Co. Ltd. at New Westminster. I was interested in seeing the operation, considering that we have thousand of acres of peat and peat moss available for exploitation. The manager was very discouraging. He indicated that they were able to make a little money during the war but various kinds of synthetics and substitutions by American farmers for bedding and fertilizer had practically put them out of business. Drying, pressing, handling, storage and transportation all are expensive for an extremely low value product. Since New Westminster is at the very back door of a large industrial area while we are so far away, I quickly gave up all idea of trying to export peatmoss from Alaska to the States. Even the pelletizing that had looked so promising was discouraged because Western Peat had tons of pellets already sacked but could find no market. The manager indicated that when they first started this process, a strong demand was indicated. However, this failed to materialize.

Both Professor Anderson and Mr. Woodward were inclined to agree with me that agricultural communities on the fringe area of British Columbia probably will not experience an immediate rise in agricultural production to parallel the increase in industrial activity. This is because relatively high wages in industry, regular hours of employment, and an easier and more agreeable life will draw most of the able-bodied young men away from the land. Most of the few farmers now in these areas are too old to be interested in changing occupations or would be unable to do the heavy, active work required. These men reflected the same general attitude toward marketing I had noted in the interior and that I later found among Provincial employees in Victoria.

### Victoria

At Victoria I saw Mr. Gilcreast who is in charge of their marketing work, Mr. Johnson who is in charge of Farmers' Institutes, Mr. McGilvery, Director of Agricultural Development and Extension, Mr. Torrance of the Department of Lands and Mr. Pendrey of the Department of Lands whose special interest is in grazing.

My summary of comments by these men is that grades and grading in Canada are relatively weak. British Columbia is particularly weak because agriculture is a minor enterprise, the British Columbia Parliament has been slow to

pass necessary legislation, and has not adequately financed the agricultural program. There are two marketing boards in British Columbia. Each has practically monopolistic control over certain products within its area. No grade above the standards required by the marketing board is necessary in the local area until the product moves across Provincial lines or moves into the area controlled by another marketing board. Where products are shipped intra-Province, no federal inspection is required. Federal laws apply in inter-Provincial shipments much as they do in the States. The Coast Marketing Board has its own inspection system which is very similar to the federal setup. They are considered to be very strong and are powerful in the marketing field. Very recently, the Interior Board also has gone along fairly satisfactorily on a bouyant market. However, it is not nearly as well organized as the Coast Board and possibly will have difficulties in an era of falling prices. This Board lacks proper or adequate storage space and requests government support or help. Such action is opposed by the Coast Board whose membership built its own. In either case, the efficient growers carry the inefficient ones.

The Marketing Boards charge \$15 per ton for hauling, washing, sacking, grading and marketing potatoes. They have the authority to establish marketing quotas and can apply legal sanctions to any producer who does not comply with the regulations. The Coast group allowed a basic quota of 4 tons per acre on one-tenth of the farm acreage in 1950. The Boards have been quite strict when allowing exemptions for individual growers. Generally, they allow individuals to market volumes of less than 4 tons without a quota. Or, if the grower is marketing in areas outside the board's influence, little question is raised. However, very few cases are exempted in practice. The general impression of the government men is that the marketing boards have charged about all the traffic would bear and that the extremely high prices maintained in local areas certainly have limited the use of local products. The high prices charged may have been detrimental to the producers since products from other Provinces have come into British Columbia under federal grades and standards. The Marketing Boards have no control over such shipments. Cases were cited where British Columbia potatoes were shipped to eastern markets and sold on those markets in competition with eastern potatoes at a lower price than the Boards would allow in their own producing area. While this move obviously was an effort to control the eastern market, there has been serious question whether actions of the Boards had been in the best interests of producer constituents.

These men made two observations concerning marketing which can apply in Alaska. These are that: (1) successful cooperatives usually result from the efforts of a very few individuals and (2) when there is a controlled market, the product quality is just high enough to get by, or, conversely, is as low as the market will accept.

Although settlement problems were not a part of the project under which I was travelling, this appeared to be an opportunity to discuss land policy and settlement problems that might apply in Alaska. Originally, the Canadians operated under a system of preemption laws very similar to our homestead laws. They, also, found that those laws do not work under western and northern conditions and they are now following various other kinds of programs to get potential agricultural land into private hands. Some of these programs are admittedly of a trial nature and several others work only reasonably well in certain areas for which they were designed. I acquired a fairly large volume

of material relative to land policy and have some notes that probably do not fit into this report. Generally, the Canadians have taken strong steps to prohibit settlement in areas isolated from transportation and other public utilities until some situation arises where such development is justified. They now are trying to assess the value of land through its potential productivity rather than using a flat rate. Other lands are held in "reserves" to prevent unacceptable uses. The grass resources of grazing lands are more and more being held under grazing leases under the Forest Service. These men like the Taylor Grazing Act type of regulation under public ownership. The ranchers usually own their hay land and the more valuable grass land and should be able to lease additional grass lands under a long term lease from the government. The government men are trying to keep a very plain and simple ownership pattern and leasing system.

The background of the land clearing tract known as the east half of lot 1550 near Prince George was of continuing interest to me and I discussed it further with the men at both Vancouver and Victoria. Apparently, some of the procedures followed were high pressured by representatives of the federal government in Ottawa who knew little of local conditions. Practices to be followed as laid out by the local representatives were overruled and provisions for close supervision by interested parties were not followed. The foreman in charge of the project absolutely failed to follow certain directions and apparently had little interest in an efficient operation. The experiment has been highly embarrassing to agricultural representatives in all stages of the government.

The Canadians are far from satisfied with available clearing machinery even after extensive experiments conducted by various groups in the last few years. They feel that the answer lies in a straight angle blade but recognize that this kind of equipment as presently designed is too hard on bearings.

Where many tracts have paid for clearing costs with the first year's crop, even greater numbers will be saddled with an initial investment too high ever to be amortized through value of crops. Where the topsoil is limited, they have found it impossible to plow brush under sufficiently deep that it will not later cause serious difficulties in cultivation. They had no qualms about admitting that, in many cases, forest fires have opened up areas to agricultural development which otherwise would have been uneconomic.

There are a few small tracts over the Province where the merchantable materials have been cut out and the unmerchantable remainder has been burned leaving the stumps. I saw one such tract on the Experiment Station at Prince George where the area had been cleared for an approach to the air field runway. This tract had been pastured for roughly 5 years and the stumps were practically rotted out. In another year or so, all these stumps can be knocked over, hauled out and the tract broken at relatively low expense. If settlers had the time, or if they were planning on a livestock enterprise, we were all agreed that this method of land clearing is much to be desired over current wasteful methods. While no statistics were available, it is the consensus that we probably would find this longer time method of land clearing to be fully as cheap as current methods when one considers the saving in organic matter and topsoil. The great disadvantage, of course, is that several years are required before cultivated crops can be grown.

At Victoria I picked up the figure that 40 percent of the persons who had preempted land had failed to acquire title. They seemed to feel that this was a normal figure.

### In The States

From Victoria I travelled to Seattle where I tried to gather Alaska statistics from the Seattle Chamber of Commerce. This effort was wholly unsuccessful. I also called on Professor Henry A. Burd and his assistant Dr. Stanton who had corresponded with me relative to a recreational study they were commissioned to do for the National Park Service. I was unable to see Mr. Russel Waltz, General Manager of Consolidated Dairy Products, since he was out of town. I visited the so-called Farmers' Market one morning and purchased a couple fresh peaches to be eaten as I walked along. While this market bustled with activity, I could not feel that very many farmers were operating stalls.

From Seattle I proceeded to San Francisco where a ride had been arranged to take me to Lake Tahoe for the Farm Economics meetings. I was disappointed at these meetings because the subjects being discussed were completely alien to my past experience or my interests in Alaska. From Lake Tahoe I proceeded eastward to the joint meeting of the American Farm Economic Association and the Canadian Farm Economic Society being held at Guelph, Ontario. In contrast to the Western meeting, I found myself listening to papers and discussions with a great deal of interest. These will be published in the Proceedings number of the Journal of Farm Economics and will not be discussed in detail here. From Guelph I proceeded to Washington D. C. at the suggestion of Dr. Fracker and then proceeded to Winnipeg, Manitoba.

### The Winnipeg Meeting

Winnipeg was not on my original itinerary and when my plans were expanded to include that city, it was necessary to telegraph ahead for an appointment. I had been under the impression that Canadians worked on Saturday forenoons and had no qualms about asking for a conference with Provincial and University people for that morning. You can well imagine my surprise and chagrin to be met at the airport by a representative of the Canadian Wheat Pool, W. A. MacLeod, Director of Publications, who told me that the Deputy Minister of Agriculture had arranged for a special meeting on Saturday even though they did not ordinarily work on that day.

The meeting was called by Mr. J. R. Bell, Deputy Minister of Agriculture for Manitoba. We met in his office in the Parliament Building from 9:00 until noon. Others in attendance were Major Richardson, representing the Farm Labor Office, Professor Joe Ellis from the Soils Department of the University, Dr. T. R. Weir, Professor of Geography at the University, Mr. Hughes representing the Settlement Section in the Department of Natural Resources and Mr. Saul Sinclair, the Agricultural Economist at the University.

These men received me very graciously and were wholly interested in helping me through a discussion of marketing problems. However, I had the utmost difficulty explaining to them problems of handling and marketing perishables where the producers were anywhere from 50 to 300 miles from the ultimate consumer. Their thinking apparently was attuned to marketing grain, some livestock and a very small volume of irrigated vegetables that can be shipped long distances to market. After a rather embarrassing half hour, however, we approached a common understanding and I will summarize my notes into 8 major points discussed in the remaining hour and a half or so.

These men felt that small relatively isolated communities probably would be well advised to:

1. Insist on production of a very few of the best adapted varieties of the several crops grown. This will give uniformity of pack and will prevent introduction of undesirable strains into the marketing organization.

2. Have a uniform high quality of pack. This will come partially from the variety being grown but more from the everlasting vigilance of the marketing organization.

3. Have storage and warehousing sufficient both as to volume and conditions. When I mentioned that these were extremely expensive in Alaska and out of reach for many private individuals, these men indicated their belief that some form of direct subsidy to private enterprise would be justified under Alaskan conditions. They also pointed out that the marketing agency should consider all aspects of the business and especially the possibility of storing imported stocks of perishables after the local supply has been used up. In this way, they would be able to reduce the per unit overhead cost of storage and warehousing, and maintain a market for their seasonal crops through controlling the flow of goods from other areas. In the Alaskan situation, it is entirely feasible that arrangements could be made for a military subsidy.

4. Encourage an increasing acreage of small fruits and berries adapted to the area. They will grow well, require only small acreages, command a good price, and there is considerable demand for them. A disadvantage in a labor short area, of course, is the high concentration of labor requirements during the picking season.

5. Get land clearing subsidized under some idea of the value of increased agricultural production to the community rather than simply as a charge to the land alone. Agriculturalists in general should examine the whole question of the desirability of agriculture in Alaska. It is conceivable that agriculture should not be asked to support itself under conditions existing at the present time. If land clearing costs and excess charges relative to agricultural production were to be assessed to the group or groups benefiting therefrom, the budget for subsidized agricultural production might well appear in appropriation bills of the armed forces or the Department of Interior. At least, society would be paying more of its share of developmental costs.

6. Enforce strict grading and inspection of all produce reaching market. This is essential. In Manitoba, potatoes must be graded by the farmers and are further subject to federal inspection at a fee where the grade falls below that advertised. A grade simply sufficient to get by is too low to build market demand. The producer and the marketing agency are jointly responsible for creating demand in the consumer's mind.

7. Work toward gaining a greater control over the volume and quantity of food stocks being imported into the Territory. This would be something like the British Columbia marketing orders for tree fruits and potatoes where the supply is strictly limited. My impression of the British Columbia marketing orders is that many farmers and administrators are not favorably impressed by the way these orders are working out. The orders are based on a majority of the votes cast rather than on a basis of either a majority of the producers or the volume to be considered. In this way, it is very easy to have minority control and a program not fitted to actual needs. It seems to me that an adequate grading and inspection service to control the quality of materials entering the Territory should be sufficient for the foreseeable future.

We are so far below the saturation point in the potential use for local products that there seems little need for import controls at this time.

8. Encourage production of a seedstock industry. All through western Canada the production of legume seeds, timothy, and new varieties of grains is a profitable enterprise. In a few favored localities, production of vegetable seeds also is profitable. Northern grown seeds are in demand both in southern Canada and in the States. (We have discussed this potential outlet many times, but as you know, we have yet to find a legume for profitable seed production or to build up a method of vegetable seed production).

On Sunday, Professor Saul Sinclair took me southwest of Winnipeg about 65 miles to an Amish community where they had built up a very profitable cooperative for processing sunflower oil. Their trade name is Safflo and the oil is used for blending purposes and for french frying. During the seasons when no sunflower stocks are available, they purchase soy beans and process soybean oil. I believe they do some business in linseed oil, but am not sure. There might be some possibility in the distant future that the combination of sunflower seed, linseed and other vegetable or field crop products could be built into an industry in the Fairbanks area.

#### Saskatoon

The trip from Winnipeg to Saskatoon was made overnight by the CNR and I spent one day in Saskatoon meeting with the men at the University and making a short trip to the environs in order to study the relation of various soil types to adapted crops. Professor Van Vliet is in charge of the Agricultural Economics and Farm Management work and was a classmate of mine at Wisconsin. These men had been approached earlier concerning my trip and I had suggested several places I might visit profitably throughout Saskatchewan. However, they definitely felt that conditions in Saskatchewan were not comparable to those found in Alaska. They indicated that most Saskatchewan pioneer fringe areas grow wheat with a secondary enterprise of grass seed. Very few cattle are grown in the Province and most of these are for meat. Vegetables and potatoes are limited to furnishing a very small part of the local market needs. Such produce must compete with wholesale supplies during the extremely short season. Most of their farmers are not interested in truck crops. Those that are, generally take care of their own marketing and little is known about them. Retailers in Saskatchewan depend on wholesalers and are little interested in handling local produce.

Since Saskatchewan is in the heart of the wheat area, it is understandable that their farmers are oriented to cash grain production while the price of wheat is pegged at profitable levels. These men reported that where a few years ago 30 cheese plants had been operating in the Province there now were four. Furthermore, there was little possibility of developing cheese production on the pioneer fringe because profitable cheese plant operation requires a highly concentrated dairy area. The pioneer fringe would have passed its pioneer condition before dairying would be sufficiently concentrated. They suggested that when I reached Alberta, I visit a cheese factory at Red Deer. When I reached Edmonton, however, I found that the Red Deer cheese factory also had closed its doors.

Even the Mennonite community near Crooked Creek had discontinued its cheese factory because cash grains and seed required less labor and had been very profitable for the past several years.

Since the men at Saskatchewan were so definite that their problems had little to offer in the way of examples helpful to me, I took the train again that night for Edmonton where I spent two days in discussions with men at the University, the Provincial government and the Dominion Division of Economics.

### Edmonton

Dr. Spence of the Dominion Division of Economics had been at Guelph and we had discussed my needs at that time. Therefore, Dr. Spence had things lined up for me to do while I was in Alberta. The men at Edmonton reflected the same attitude concerning marketing problems as I experienced at Saskatoon. However, there was one farmers' produce cooperative operating near Edmonton and I talked with the farmer-manager and with one of the larger cooperative members. The co-op is having a stiff struggle because it lacks volume, has rather poor storage facilities, has had poor management in the past and does not have a sufficiently large volume of business to make a profitable organization.

On the farm of Jacob Groot I saw a very simple, inexpensive but satisfactory root house, 225 feet long by 36 feet wide which was constructed for a cash investment of \$3,000. The pit for the root house was dug about 3 feet deep by a bulldozer, the height is about 8 feet on the sides with a 12 foot center. The walls are of concrete and the roof is made of rough poles used for rafters with brush thrown over the poles to hold the straw for insulation. Two to 3 feet of straw was thrown over the poles and rough lumber was laid close together over the straw. Over that was a layer of roofing paper and overall was laid sheet aluminum. Potatoes are unloaded by a conveyor through doors in the roof and channelled by trough to various parts of the storage space. They do not allow the potatoes to drop for any appreciable distance because of possible damage that might occur to them. Potatoes piled 8 feet high last year kept perfectly. Mr. Groot and his sons experience no difficulty in selling their potatoes because they grade closely at the farm. The Groots and others in the Edmonton area mentioned that Alberta farmers are not co-operative minded and also are not interested in production of vegetables for local consumption.

In a discussion with one of the career men in the Ministry of Agriculture we talked of agricultural problems in general. He indicated that most agricultural problems take a long time for solution and they usually cost additional money and effort if settled rapidly. In the agricultural development of new areas, administrators sometimes cannot afford to be sympathetic for the individual. That is, development may occur normally only at the expense of 2 or 3 generations of settlers. This has been the historical situation and from all but the standpoint of social reformers is acceptable for the long run. Agricultural pressure groups are on the wrong track at the present time and probably are riding for a fall. The grain pools in Canada have gone far beyond desirable interests of their farmer constituents and into pressure politics which has nothing to do with the grain marketing function for which they were established. Patron groups are beginning to set up an opposition to the administrators now in control of the grain pools.



On the evening of Tuesday, August 14, I was invited to attend a meeting at the Kraft Cheese Plant located about 60 miles southwest of Edmonton. I attended with Mr. McCollum, director of Dairy Marketing for Alberta. Kraft Company management was threatening to close the plant because of a \$6,000 loss last year and because the farmers were not providing the quantities of milk agreed to when the plant opened.

The farmers on the other hand were complaining about:

1. The milk test was low. Many of them felt that the local plant manager was not taking the samples adequately or else was making a poor test.
2. The price was a few cents lower than that of a competing plant about 30 miles away. (They also were complaining because the whey was re-separated to extract some of the lost butterfat).
3. There was considerable jealousy over division of the whey. Apparently 2 or 3 farmers were making good use of it in feeding hogs, and while some of the others had no hogs they felt that they were entitled to their share of the whey.
4. The cans were supposed to be washed at the plant but came back in an unsanitary condition so bad that when the milk was reshipped to the plant it was refused.

Discussion of the milk test was by far the most heated of all the problems and Mr. McCollum decided that the complaints would bear looking into by his inspector even though previous periodic checks made of the milk samples had shown no appreciable variation from those reported by the cheese maker. He intended to send a different inspector to the plant for approximately one week of intensive search into the difficulty.

Many of the patrons of this plant were of foreign birth and some were apparent radicals. However, the prevalence of dissatisfaction indicated that public relations between the plant manager and the patrons was non-existent. (The plant manager was not even in attendance at this meeting).

After the meeting, the Kraft representative from Toronto told me that the company also was dissatisfied with the manager and already had a replacement for him. (I do not understand why he so obviously committed telling the patrons the current situation about the manager).

#### The Fort Vermilion Area

From Edmonton I travelled by bus to Peace River where I met Mr. Newcomb, Alberta Director of Extension through arrangements made by Dr. Spence. Mr. Newcomb was going to Fort Vermilion the following day and allowed me to ride with him on this trip. Fort Vermilion is about 300 miles downstream from the city of Peace River and is separated from the nearest agricultural community by at least 150 miles of gently rolling terrain roughly similar to that around Big Delta or possibly the Pitman area. There would be stretches of very sandy soil interspersed with poorly drained areas and an occasional wet spot giving evidence of alkalai. As we approached Fort Vermilion from the west, we passed through an area of marshy, wild hayflats being utilized by Indians as a source of winter hay for their horses and cattle.

The settlement of Fort Vermilion probably is about the size of Wasilla but its trade area covers hundreds of square miles. Some farms with relatively large acreages of grain are located as much as 50 miles from the river and the road is practically impassable much of the year. The fact that several family groups are of religious sects opposed to formal education and modern conveniences help to prevent untenable pressures on the public utilities of this area. The Experiment Sub-station at Fort Vermilion is operated by Mr. Victor Lowe and puts our stations to shame for landscaping and general neat appearance. They still are clearing land and are anticipating the time when they can farm on a large scale as is common throughout western Canada. I found that they were growing Olli barley, Saunders wheat (which has a higher commercial grade than Thatcher), Beaver oats, Redwing flax and Grimm alfalfa although they feel Ranger is the coming variety. Yields they have experienced in the period 1939-48 are published in their Progress Report of which I have a copy.

Throughout Alberta, I had heard complaints concerning the high proportion of total value of grain dissipated by the freight rates on the long haul to market. The agriculturalists also were advocating livestock production as a diversification and to help maintain soil fertility. I was very much surprised on the Fort Vermilion Station to find that they have a college graduate animal husbandman to care for a herd of approximately 5 pure bred shorthorn cows and a bull, 2 brood sows and about 150 laying hens. The pure bred cattle were a requirement apparently from the head office at Ottawa and the increase is being sold to local farmers in the hope that they would increase livestock production. The history of the beef cattle herd is remarkable. Of the last 18 calves dropped, 14 or some such number were bulls. It would seem to me that the Canadians are off on the wrong track in trying to do research or extension work with such small numbers of livestock and that they should be in research on grade cattle production rather than on pure bred stock. (I found the same problem at Beaver Lodge when I reached that station, although their numbers of livestock were considerably larger because this was a main station. They also use grade stock for feeding trials.)

About 3 years ago when the Yellowknife mining community was first opened up, a few families from the Fort Vermilion area began shipping produce by air to the mine. The quality was low and within a matter of weeks all but one or two families had lost their market. These 2 or 3 families maintained their high quality and kept a toe-hold in the Yellowknife trade. Additional families are slowly working their way in and the airfreight business between Fort Vermilion and Yellowknife in eggs and perishable vegetables is appreciable when products are available. Butter and meats for this market have to be inspected. Since there is little livestock in the Fort Vermilion area these farmers have not tried to capture that market.

Some hogs and beef are fed on the grain from these farms and then shipped up river to Peace River. This is one area where it seems to me a livestock economy should be pressed to the fullest extent possible. Surplus potatoes and root crops are shipped by truck to Hay River and then across the lake by boat just before freezeup or trucked across on the ice during late winter. In the spring of 1951, there were no potatoes left for sale in the Fort Vermilion area. Potatoes grow well and it is anticipated that the acreage will be increased if the Yellowknife market holds up.

The Rest of the Peace River Country

Mr. Newcomb arranged that his District Agriculturalists in the Peace River area should show me that section and shuttle me along from one to the other. When we returned from Fort Vermilion on Saturday, August 18, we stayed overnight in Berwyn a few miles west of Peace River. Arrangements were made that Mr. A. W. Beattie would show me that section of the area and take me to Grand Prairie to meet Mr. J. T. Stranatka. In the Berwyn-Peace River section wheat varieties are about equal amounts of Thatcher and Saunders, barley is Olli and Duall, oats are about 85 percent Victory and the remainder are Beaver and Early Miller, flax is entirely Redwing, alfalfa is 95 percent Grimm and the remainder Ladak. The potatoes are about half Netted Gems and half Carters' Early Favorite. The season is too short for the Netted Gems and usually the potatoes are too small.

Most of the Peace River area is being used to produce wheat, barley, oats and various grass and legume seed. Wheat goes for milling, oats and barley to eastern Canada for feed, seeds to southern Canada and the States. There are very few livestock in this region. The agriculturalists are agreed that farmers need to get into livestock for a permanent economy. Crop yields are going down, erosion is increasing and weed control is a serious problem. A small acreage of vegetables is grown on small farms along the banks of Peace River. These are mostly potatoes, sweet corn and cabbages. Other vegetables would be profitable except that the supply of, and wages for, field labor are limiting factors. Furthermore, there is no large consuming area in all of the Peace River block and most families have gardens that supply fresh vegetables at the time when farmers would be trying to sell their crops.

The good lands in the Peace River area have nearly all been taken by now. There is some left near Manning which is on the edge of the Peace River area on the Hay River highway but a considerable distance from railhead.

By the time the Veterans' Land Clearing projects were underway most of the good deep soil areas were gone. Most of those left were shallow and on areas of rough land. Such lands will need to be farmed with legumes and a maintainable crop rotation to build up good soil tilth and fertility. Even these shallow soils will yield well when properly handled and after fertility has been built up. Farmers on these soils can grow seed, but since a seed crop is not always certain, this enterprise in connection with the livestock economy would be far more profitable than straight grain and seed enterprises.

We went through parts of the notorious, so-called Lassiter project. It would appear that Mr. Lassiter had stepped into a rather hopeless proposition but that he had tried to fulfill the letter of the contract. The work originally was proposed by a representative of the Provincial Department of Lands and Forests, the newspapers got wind of it and boosted the political aspects to the point where something had to be done. The first effort at mass produced land clearing was arranged with a Seattle man but this fell through. They then contacted Lassiter and he undertook the project. As you know, Mr. Lassiter spent many thousands of dollars on research into types of heavy equipment both before and during the time of his major activity. We drove through some of the area where this type of clearing had been done. A considerable area of relatively shallow soils had been cleared near Wanham and the equipment was located near Tangent at the time I was in the area.

We managed to get within 5 miles of the camp but a thunderstorm was coming up the Smoky River and we were afraid of the slippery dirt roads. Therefore, I am unable to report on the appearance of the machinery.

The District Agriculturalists were very disappointed concerning the way land is cleared in areas of shallow soils but recognize that Mr. Lassiter would be unable to do much differently under the circumstances. Plowed down brush and fire-felled logs have a tendency to work out and become a nuisance in the years following the original breaking. The deep plowing puts all the remaining humus and topsoil too deep down for plant utilization and brings to the surface a relatively impermeable, infertile clay subsoil. This must be worked up, fertilized and babied into shape before a farm will support the family. Many veterans do not have the money, the interest or the time for this type of reclamation. Consequently, their crops are poor to begin with and will remain so as long as they stay in cash grain. By following recommended rotations, including use of livestock, the District men believe that in a few years these relatively infertile soils can be made fairly productive. Furthermore, crops of alfalfa and sweetclover which failed to set seed or which were immature at time of frost could be fed through cattle and thus salvaged. The manure returned to the land would add organic matter and productivity to the soil.

I was surprised to find that this area had had only one bumper crop of seed in 7 years. Three others had been fair, that is, had paid expenses but left practically nothing for profit and the remaining 3 had been failures. The wheat story had been somewhat better but some sections usually get caught. The late season rains in 1951 had created prime conditions for growth but the season was late, and in mid-August as I was going through that area I saw wheat and flax still in bloom, oats that were pea green and just heading out and alfalfa and sweetclover still in bloom. As I was leaving Ft. St. John I heard that there had been a frost in Grand Prairie, so it was quite evident that the crops would be damaged before they were ripe throughout much of the Peace River country.

Many of these farmers have drifted into the Peace River from further south in the grain country of both Canada and the United States. They still are cash crop farmers and are insulted when one mentions livestock farming to them. However, those extremely few people with beef herds this year will be the ones who will be able to reclaim something from the immature crops.

Mr. Stranatka of Grand Prairie took me to Beaver Lodge where I spent the day talking with Mr. Stacey, the superintendent of the Experiment Station and looking over the plot work and the livestock experiments. The Beaver Lodge Station is located on the south slope of a fairly large hill. Practically all the fields are on an east, south or west slope where erosion control methods must be practiced. Farming techniques being developed and practiced on this farm are aimed at controlling erosion on large fields and long slopes. Mr. Stacey is a very interesting individual to meet and helped to clear up several points in my mind. His Station has been expanded greatly in the past 2 years and he has some difficulty limiting the work of his younger research men to volumes they can handle adequately. They have a tendency to begin more projects than they can supervise and to make each project larger than can be handled. This fault, of course, is typical of all interested researchers.

From Beaver Lodge to Dawson Creek the trip was made by bus. At Dawson Creek I was met by Mr. D.A. Johnson, the District Agent for the British Columbia Extension Service, who took me to Ft. St. John where we met Mr. Russel Brown the District Agent there. We spent the major portion of the day west of Ft. St. John on the banks of the Peace River in an area that probably can be considered the western edge of the Peace River agricultural area. In spite of a quite rugged terrain, the major farm enterprise still was cash grain -- wheat or alfalfa seed. There are a few beef spreads and more people were thinking of going into beef because of the extremely isolated situation.

That evening Mr. Brown took me east of Ft. St. John and through an area that had been cleared under the direction of Mr. Kelley Haugen, while local representative of the Veterans' Land Act. This project was called the Indian Reserve project and had been conducted on a competitive, contract basis with Mr. Haugen letting the contract and supervising the work. The land clearing had been done very reasonably and the quality of the work was superior to that being done by the Provincial land clearing crew or by many other contractors in the Peace River country. The area around Ft. St. John is composed of long slopes where erosion control becomes a problem after a few years.

The western half of the Peace River country actually is quite rough. The eastern half, east of the Smoky River, appears to be more like prairie country, gently rolling or almost level. There is a tremendous agriculture potential in this area, but it is not being maximized at the present time. I am quite certain that ultimately these farmers will have to practice a mixed livestock and grain economy to maintain their resources and to maximize their income over the years. Cash grain and seed crops are not a sure bet and, when the price support programs are dropped, many of these farmers will be unable to operate on cash grain.

My original plans had been to fly from the Peace River country to Anchorage but the plane schedules simply did not fit into my itinerary. I found that coming by bus would require only one day longer than flying. This would give me an opportunity to see the country along the Alaska Highway and also to catch a glimpse of the sub-station at Mile 1019. This was done. So far as I am concerned, I saw no potential agricultural land from just north of Ft. St. John to the Matanuska Valley. I was not impressed with the indications at 1019, although that is a new station and may be undeveloped. I had no opportunity to talk with the superintendent of the Station.

### SUMMARY

An extensive trip was made through western Canada to study Canadian methods of marketing locally grown perishable vegetables on the fringes of agricultural settlement.

Except for tree fruits and potatoes in southern B.C., there is little formal interest in marketing these products. There are a few small struggling co-operatives, but the relatively small volume of perishables is marketed predominantly by individuals. In British Columbia the major interests are in forestry and manufacturing. Dairying is declining even in the intensive dairying area of the Fraser Valley. In the isolated communities between Prince Rupert and Prince George all agriculture is declining as the older generation drops out of production and is not replaced, or is replaced only at a lower scale of production.

Manitoba, Saskatchewan and Alberta farmers are interested in cash grain crops and grass and legume seeds. This is true north as far as settlement goes. Prices on these crops are good currently and the risk of financial loss is minimized by various kinds of price supports. Most commercial vegetables in these areas are grown on irrigated sections in the southern part of the Provinces. There are no large areas of non-irrigated lands so particularly suited to vegetable production that they compete very successfully with supplies from the States. Canada is disadvantaged by east-west distances in any efforts to be self-supporting in these items.

Cooperatives and other formal marketing organizations generally prefer that perishable vegetables be marketed by the individual grower. Too much risk, shrinkage and poor quality is involved in the small volumes to be moved. Generally speaking, they prefer to handle storables such as potatoes, turnips, carrots, and cabbages that need not move into consumption channels immediately.

Other seemingly desirable practices being followed include:

1. Limit the number of varieties to a bare minimum. This makes for a uniform product which aids marketing.
2. Encourage uniform cultural practices such as kinds and amounts of fertilizer applied. This also helps to standardize the product.
3. Harvest when crop is ready. Large size generally is undesirable.
4. Have adequate storage facilities on farms and at the co-op. Harvested crops must get to market to be profitable.
5. Make producer responsible for grade. Canadian farmers generally do their own grading. If their grade is not up to standard, the co-op re-grades at the farmer's expense, not as an overhead charge against all members.
6. Get the best managers available to run the business.
7. Pay wages sufficient to get and keep competent help.
8. Require that "specialists" keep busy, largely by floating around during their slack seasons to other departments that need help. Several successful plants do their repairing, remodeling, new construction, loading

and unloading of freight cars, etc. with regular help recruited from other departments. This has the double value of reducing overhead costs and keeping a trained staff on hand from year to year.

9. Keep their overhead and handling charges low. One co-op was operating on a 5 percent overall margin. A vegetable co-op was operating on a 10 percent margin and building up surpluses. This low margin occurs partly because they handle only commodities that will store. Perishables such as lettuce or celery would increase their overhead appreciably.

It was observed several times that good co-ops usually result from the efforts of a relatively small number of interested members. The rest go along for the ride.

An independent group of Canadian agricultural workers which met to discuss the problem of marketing perishables in Alaska from their experiences in Canada listed several of the same points emphasized by co-op managers and individuals and added other. Their 8 points were:

1. Insist on production of a minimum number of adapted varieties of each crop.

2. Have a uniform high quality of pack.

3. Have adequate storage and warehousing. Possibly enter the wholesale business to supply imported stocks when not available locally. Alaskans should examine the possibility of a subsidy by the Armed Forces since that is their major market currently.

4. Encourage an increasing acreage of small fruits and berries adapted to the area. They require relatively small acreages of expensive land and meet a good market demand.

5. Get clearing subsidized on the basis of its value to society--i.e., everyone in the States as well as Alaska. If food production is a part of national defense, the high costs of getting production should be a charge against the defense effort and not against the productivity of the land. If this principle could be carried out, carrying charges and interest on investment in land would be in line with productivity and at rates farmers could afford.

6. Enforce strict grading and inspection of all produce reaching market. This is essential. A grade just sufficient to get by is not good enough.

7. Work toward greater control over the volume and quality of food stocks being imported into the Territory. This is largely a matter of inspection and grading to meet marketing standards.

8. Encourage possible production of seed stocks as soon as they become available. Northern grown seeds are relatively cheap to ship and meet an active demand in southern markets.