

FOREWORD

This report, "Historical Perspectives in Alaskan Agriculture," is one of a series being published under the title, CREATING A NORTHERN AGRICULTURE, by the Institute of Agricultural Sciences. The authorship is strictly that of Dr. Wayne E. Burton. Technical consultation has been provided by Dr. Minnie E. Wells. The content and conclusions are those of the author and do not necessarily reflect the views and policies of the University of Alaska, the Institute of Agricultural Sciences, or other Institute faculty.

The objective of these reports is to direct attention to opportunities for development of a northern agriculture, and to opportunities foregone if agriculture continues to be ignored in Alaska's land use and control planning process.

This series of reports rests squarely on the belief that substantial development of northern agriculture is in the national interest as well as for Alaska, and would contribute materially to the economic and social well-being of Alaska's peoples, particularly after the "boom" of the petroleum industry is gone. Moreover, development of agriculture could provide the largest source of employment for Alaskans of any resource based industry.

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CREATING A NORTHERN AGRICULTURE

II. HISTORICAL PERSPECTIVES IN ALASKAN AGRICULTURE

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HISTORICAL PERSPECTIVES OF ALASKAN AGRICULTURE

Wayne B. Burton

"The pendulum of opinion about what Alaska is or can be has swung back and forth from optimism to pessimism during the 100 years since its purchase; and today one still finds many contrasting views about this land and what the future may hold for it. The differences spring in part from the differing philosophies, desires and yearnings of the people who have come north to populate Alaska, but they also reflect its enormous size and the great diversity of its natural and physical features, which make generalizations about the future extraordinarily difficult." (10.).

Introduction

Much can be learned about the present status of agriculture in Alaska from a review of the long and varied history of Alaskan agriculture. At some times, concerted public efforts have been directed to its development; at others, agriculture has suffered long periods of public neglect. At national levels, opinion has vacillated from limited optimism to abject negativism. However, correlations may be found among the public policy attitudes and agricultural development success.

The Dilemma

The dilemma regarding agriculture in Alaska began with the United States' acquisition of the territory. Only six days later the Secretary of the Interior proclaimed that any attempt to secure land under the United States land laws be held illegal and, if necessary, the intruders removed by force (10). Some thirty years elapsed before public lands could be entered and patented for purposes other than mining. Not until 1897 did official Washington begin to recognize food production possibilities in the territory of Alaska.

The reindeer development (21), beginning in 1892, created a dilemma because reindeer production was not considered agriculture by either the Bureau of Education or the Eskimo residents of the region. Yet, its premise for development was that of subsistence and commercial food production. The Bureau's emphasis was on training herders. The result was a concept of *wealth* rather than a concept of reindeer husbandry. No public infrastructure evolved to support continuation of the industry. The situation was not unlike that of Canada's reindeer development efforts. In contrast, the Soviet Union has approached reindeer development from a range husbandry perspective with considerable development success in some regions.

The initial comprehensive assessment of agricultural production possibilities in Alaska began in 1897 with an extensive reconnaissance by an Office of Experiment Stations party headed by Walter H. Evans. Its report (20) was sufficiently encouraging that a second survey was carried out the following year (1898). Cattle, sheep, vegetables and forage crops were found in coastal areas, and to some extent as far up the Yukon Valley as Circle City.

The beginning of organized agriculture came with the establishment of experiment stations located at Sitka (1898-1932), Kodiak (1898-1931), Kenai (1899-1908), Rampart (1900-1925), Copper Center (1903-1908), Fairbanks (1906-to-date), and Matanuska (1915-to-date) (15-A). Data gathered by early efforts substantiated production possibilities in areas estimated to encompass some 40 million acres (15). However, when the early experiment stations did not provide anticipated settlement-development results, "official" Washington, D. C. chose to ignore Alaska agriculture development until the mid-1940's.

The second comprehensive assessment began with recognition of Alaska's importance as a military outpost during World War II. A task force was dispatched from the Agricultural Research Administration, U. S. Department of Agriculture, during the summer of 1946 to carry out an exploratory investigation of agricultural problems in Alaska. The purpose of this investigation, as identified in the final report (1), was to assess agricultural problems and future possibilities in terms of anticipated support functions *required by the military presence* in Alaska.

While the task force carried out an extensive survey and appraisal of agricultural lands, it identified *not more than a million acres* as being suitable to meet needs identified in the task force assignment. Following the earlier pattern, the U. S. Department of Agriculture established an agricultural experiment station (Palmer - 1949), and, via statutory authorization, absorbed the then-existing University of Alaska experiment stations at College and Matanuska. The 'million acres' perspective remained intact for some twenty years.

During the mid-1960's agriculture came under scrutiny of the Federal Field Committee for Development Planning in Alaska, which concluded that agriculture had not responded adequately to the input of public resources. It also found an almost total lack of the type of economic analysis that would permit an accurate assessment of the long range potential for food production in Alaska. In addition, no systematic search for new and novel methods of production in northern regions was found as distinguished from research into products which now grow and mature in such region (12).

The Federal Field Committee's agricultural task force carried out extended discussions, and worked for more than a year on a report of the agricultural situation in Alaska - to no avail. A cooperative study between the Economic Research Service - U. S. Department of Agriculture and the Institute of Social, Economic, and Government Research - University of

Alaska came to a similar end in that no final report was completed. One of the participants of both studies completed an individual report at a later date (7).

The idea underlying the unofficial national policy (as late as 1968) was that agricultural production in Alaska was not yet needed, and as long as *stateside* production created surpluses, greater production in Alaska would not be in the national interest. There appeared to be an unfounded confidence that inputs and institutions could be sent to Alaska at any time, and instant successful production could be accomplished. Besides, Alaska markets belonged to Seattle distributors for disposal of their surpluses (6).

Assessments from other than an agricultural perspective have also been negative. With penetrating insight, Rogers (22) has expressed one generally held perspective: that Alaska's attempting to recreate the process of past development based on agricultural settlement would be either far too expensive or utterly impossible.

Vanderhill (24) has been most articulate in expressing a widely recognized *temperate zone syndrome*:

Analysis of Alaskan agriculture and its circumstances leaves no doubt of the serious handicaps under which it operates — its basic marginality. Examined coldly, it is a risky endeavor, yields low returns, and is nonessential to the well-being of the state of Alaska. One has the right to expect that farming will eventually disappear, as it has in the Yukon Territory, for marginal activities are difficult to maintain. . . . Ironically, it does not appear likely that new strains of crops and innovative farming techniques, all slowly and expensively developed by a corps of serious and capable scientists, will be effective in the long run. (24).

Negative beliefs, illusions, and the conventional wisdom expressed in recent assessments have evolved partly because cultural norms associated with Alaskan rural and urban ways-of-life do not include the concept of "agriculture". They have also evolved because suitable information, experience, and commitment have not been available to make comprehensive analyses of agricultural development possibilities for some future period.

Regional Perspectives

One often gains the erroneous impression that agriculture is relatively new in Alaska, and that it began, and has continued almost exclusively, in the Matanuska Valley. Perhaps to the surprise of some, and conveniently forgotten by others, agriculture was well established in the Russian trading company settlements in Alaska when Lewis and Clark began their illustrious trek from St. Louis — up the Missouri River — westward to the Pacific Ocean.

Russian Alaska

Bancroft (4) reports that agriculture was of primary concern in selecting sites for early Russian trading posts, and most settlements were reported to have raised vegetables and harvested forage as well as having kept chickens, hogs, sheep or goats, and even cattle. The literature abounds with documentation of cattle being kept at various coastal and island settlements. Elliott (11) reports that one Russian trading company had a herd of 300 cattle near Kodiak from 1795 until 1868, and Georgeson (16) documents the continuity in the production of cattle. Descendants of the Russian cattle were found when the first United States' agricultural station was established at Sitka in 1898, although some cattle had been introduced from the States after the American occupation. All the cattle at Kenai and Ninilchik were of Russian origin, and their descendants were found at Ninilchik as late as 1929.

Western Alaska

A second significant agricultural development, often overlooked, was the introduction of reindeer to various areas of Alaska. Olsen (21) reports that significant numbers of reindeer were brought into the Seward Peninsula, beginning in 1892, from various Siberian locations. In all, more than 1200 deer had been imported from Siberia by 1902:

Of the 6,505 deer in Alaska, 2,841 head belong to 68 Eskimo herders; 2,176 are on loan to or owned by eight missionary societies; 1,150 are on loan to or owned by five Lapp herders; and 338 remain under Bureau of Education control (21.11).

Reindeer provided considerable quantities of meat, and numbers of draft animals, during the Nome gold-rush era. They were also used to alleviate acute food shortages in other gold camp locations. By 1933, there were estimated to be 640,000 reindeer ranging from the lower Kuskokwim basin to Point Barrow. Reported numbers of deer declined very rapidly during the 1930's and 1940's. Legislation was enacted in 1937 restricting reindeer ownership to Alaska Natives. By 1970, only 25,000 reindeer were reported. Numbers have since decreased even further.

Southeastern Alaska

A perusal of agricultural reports, including the Russian period, would reveal a long intermittent history of subsistence and small farm production attempts in Southeastern Alaska. Bancroft (4) reported subsistence agriculture at each of the Russian settlements. The Office of Experiment Stations (20) reported subsistence agriculture at most settlements visited in 1897, and noted one farm at Killisnoo and remnants of a farm at the mouth

of the Stikine River. The first experiment station was located at Sitka (15). The task group of the Agricultural Research Administration in 1947 (1) made only brief reference to subsistence agriculture in Southeastern Alaska. While several small farming attempts have been reported from time to time, and dairy cattle were kept in the Juneau community for an extended period, only small subsistence agriculture is now found in that region.

The Tanana Valley

The hey-day of agriculture in the Tanana Valley is generally forgotten although it was an illustrious period that lasted for almost forty years. The Fairbanks community was the center of commercial agriculture from the turn of the century until the late 1930's. It has been reported that agriculture in the Tanana and Yukon Valleys started by disenchanting goldseekers and hungry miners. Whatever the start, agriculture was well under way in the form of gardens, market vegetable production, hay production, and numerous attempts at grain production when in 1905 the people of the Fairbanks community petitioned the Secretary of Agriculture for the establishment of an experiment station at some suitable point in the Tanana Valley. Their efforts were rewarded when a reservation was made for such a station (Executive Order 1023, March 22, 1906, Fairbanks, 1400 acres) (3).

The Fairbanks community went through several stages in its agricultural development history. The first was an era of model-farm demonstration, which lasted for only about seven years. The station report of 1913 (15) illustrated the success of this approach to agricultural development: *farmers and market gardeners about Fairbanks object strenuously to the growing of potatoes for market by the station.*

The next period has been described as the "grain-livestock era." Several significant events occurred during this period: (1) A land withdrawal was made for the Alaska Agricultural College and School of Mines in 1917. (2) A flour mill was purchased and installed in 1919. (3) The Fairbanks experiment station was practicing fully mechanized farming by 1919. (4) The "Better Sires Plans" for upgrading livestock was extended to include Duroc-Jersey and Hampshire boars, a Shorthorn bull and a Toggenberg buck. (5) Yak were introduced to the experiment station to initiate a cross-breeding program with Galloway cattle. When the College of Agriculture and School of Mines was opened in 1921, agriculture was offered as one of the five courses of study.

The focus of institutional programs next moved toward helping farmers with their recognized needs, and the collection of data to document the status of various segments of the agricultural industry. During the year 1925, the Fairbanks station sold 480 pounds of pea seed of the *Alaska* variety to the National Cannery Association for distribution among growers in various places and another 400 pounds to a grower in Michigan.

Also other exotic livestock were brought to the Fairbanks community for appraisal of their adaptability for possible domestic purposes in the Interior. At the time they had their local office at the University, the Biological Survey brought in 23 bison, which were later given their freedom at Big Delta, where they have prospered. Then in 1934, 34 musk oxen were brought from Greenland and pastured near the University for convenience in observation. According to Gasser (14), their wool (qiviut) was found equal to that of the vicuna. In the late 1930's the animals were transferred to Nunivak Island where they have multiplied. Some transplants, in recent years, have been made to mainland locations. One shipment of 40 head has recently been sent to the Soviet Union.

The Alaska Agricultural College and School of Mines became the University of Alaska in 1935, and the offices of the Experiment Station and the Extension Service were combined and placed under one director in 1937. This period marked the beginning of the end of the Tanana Valley's dominance of commercial agriculture in Alaska. One further era was to emerge in the Valley; the era of traditionalism. Beginning after World War II and continuing through the 1960's, it was characterized by traditional approaches to farming and to public and institutional services for the agricultural sector. Because of public disassociation from agriculture, it declined in the region.

The Matanuska Valley

The scope of this paper does not lend itself to separation of fact and fantasy in the institutionalized illusions regarding the Matanuska Valley. Although homesteaded prior to World War I, only limited agricultural development occurred in the Valley before World War II. The primary purpose of the settlement of the Matanuska Colony in 1935 was not commercial agriculture, but as Johnson and Stanton (19) reported, the goals were:

- (1) to get and keep families off relief;
- (2) to determine whether or not Alaska could absorb further population;
- (3) to aid the economy of Alaska by producing more food locally and hence lessening dependence on expensive and unreliable transportation.

The settlement of the Matanuska Colony was unique in that it provided 200 families of settlers starting at one time with a wide range of community services such as an agricultural service and supply center, an organized market for farm produce, and sources of credit. Homesteading continued to expand around the colony because of the availability of such services, and the area became a focal point for development of all agency programs within the state. Since the colony administration and subsequent agencies focused mainly on the Valley, the "establishment" jealously guarded the position of dominance that had been attained by group settlement.

A 1947 study (1) by the Agricultural Research Administration, U. S. Department of Agriculture, reported that 140 of the 250 farm families in the Valley in 1946 were in the project area of the original settlement, and 52 of these had been among the original 200 families. By then some 8,000 acres had been cleared with more recent work accelerated by the use of bulldozers.

There were about 20 dairy farms along with general and truck farming making up the three main types. While few farmers devoted all their time to truck farming, most raised some truck crops and most sold all their crops to their "cooperating association". The colony period ended with the beginning of the Alaska Experiment Station in Palmer in the summer of 1949.

While historic nostalgia regarding the Matanuska Colony has filled volumes for almost forty years, significant commercial agricultural production did not occur until the decades of the 50's and 60's. It was then that subsistence and homestead farming evolved to truly commercial (agricultural) production in the valley. Commercial Grade A dairying came of age with fresh milk sales to the military for troop issue and commercial production of potatoes and of other vegetables attained the same status with the demise of the colony-homestead era. By the early 1970's, agriculture was declining in relative importance in the Matanuska Valley with growing emphasis on industry, subdivisions, and homes for a population whose employment was not concerned with farming.

The Kenai Peninsula

The Kenai Peninsula has received widespread attention over an extended period of time. Johnson (18) best describes development efforts and results:

(It was) . . . an Alaskan Mecca for many venturesome families from the States. They flock there each year searching for "free" land and fresh opportunity in a new country. . . . Most new arrivals know little about pioneering or Alaska conditions. They have no experience in rural living. All too many find that Alaska is a hard bargainer, taking their savings and their hopes, and giving them in return a bit of land which they are powerless to use. Settlement continued to outpace farm development and even interest in farm development.

A more intensive private search for farmland and homestead opportunity took place on the Kenai Peninsula than in any other part of Alaska; however, the hardships and isolation took a heavy toll:

. . . but, beneath this bustle over oil, I was saddened by the numerous signs of decay in settlement on the Kenai Peninsula. Place after place I had observed the operator make a start at farming now was vacant. Hundreds of acres had been cleared by bulldozers but never broken or seeded to crop. A preponderance of the few acres where settlers had planted crops now were reverting to native grass and bush (17).

With the opening of the Sterling highway in 1953, tying the Kenai Peninsula to the existing road system of southcentral Alaska, anticipations of agricultural development were again excited only to fall by the wayside again. Community services for agriculture were slow in coming: (1) no organized produce markets were developed; (2) credit sources remained in Palmer; (3) service and supply firms were virtually absent. To date the situation has not changed materially, and only a few small cattle ranches and an even smaller number of farms remain.

Kodiak and the Islands

Kodiak Island has undoubtedly had the longest history of continuous agricultural production of any area in Alaska. Highly inflated images of Kodiak's "beef industry" have been religiously perpetuated and carefully guarded. Like other Alaskan images, they may be quite misleading. Only limited numbers of livestock and even more limited quantities of subsistence vegetables have been produced on the island at any one time. Fewer than 2,000 cattle and only a few hundred reindeer represent the upper limits of ranch development. Not more than five active ranches are to be found on the island now.

Umnak, Unalaska, Chirikof and numerous other islands presently have varying numbers of cattle and sheep on them. Some islands have a long, though not well documented, history of domestic livestock. For example, sheep have been on Umnak and Unalaska for some 50 years and other locations such as Chirikof have maintained cattle for a far longer period. Some 3,000 reindeer (now "administrative caribou") are to be found on Umnak.

Kodiak and the Islands appear to be well suited to some types of domestic livestock production since cattle have multiplied and prospered in an almost feral state for many decades in various locations. The distance from public institutions, service and supply centers, and markets has been the most severe deterrent to ranch development up to this time.

Development Perspectives

Most assessments of Alaskan agriculture have been dependent on historical descriptions of events that have occurred and on limited statistical data (particularly until regular collections of agricultural production data were initiated in 1953). Such assessments (13, 24) have provided little insight or understanding of development perspectives, policy goals, development programs or the desires of Alaska's population.

We are dependent on Bancroft (4) for assessments of development perspectives during the Russian period. As previously noted, Russian trading companies gave consideration to agriculture in selection of trading-post sites. Fresh milk, fresh meat, and fresh vegetables were of particular concern.

While such efforts and results have been often overlooked or ignored, one must recognize that such efforts accomplished the desired results for the place and time. Fresh produce was available to meet settlement needs as they were known at the time.

While not generally recognized as agriculture, reindeer production did receive considerable attention prior to USDA recognition of food production possibilities in Alaska (21). Reindeer provided significant quantities of meat and numbers of draft animals during the Seward Peninsula gold-rush era, and were used to alleviate acute food shortages in other gold-camp locations. Reindeer were also introduced to many village locations to establish domesticated herds for subsistence food supplies. Even though the reindeer "industry" is at its lowest ebb since the beginning of the century, one must not forget that it was the first, largest, and most successful agricultural development attempt in Alaska after United States' occupation of the territory.

The nature of Tanana Valley agricultural progress was historically a spontaneous frontier development. The sequence of development events has been previously described. The significant consideration in this instance is the parallel between agricultural development and development of public support from institutions and agencies. While public programs were directed toward aiding it, the agricultural industry prospered; when institution and agency interest was directed elsewhere, commercial agriculture all but disappeared. With the revival of institution and agency interest, some commercial agriculture is again developing (3).

The Matanuska Colony settlement was of a planned program nature. The purposes and goals of the colony, as previously reported (6, 19, 23), were not directed to commercial agricultural development, but as land allocation within colony programs substantiated, the emphasis was on agricultural development for subsistence. The report on exploratory investigations of agricultural programs of Alaska (1), carried out during the summer of 1946, did not yet identify commercial agricultural development as a goal in the Matanuska Valley or elsewhere. The development of farming was considered merely as an auxiliary to that of the military, mining, and industrial fields; nevertheless many facets and problems of agricultural development were examined because of the conviction that Alaska would play an important part in the future of the United States. Alaska's contribution, nevertheless, was expected to be in the providing of fish, minerals, and timber rather than in agricultural products. With the initial start of the federal research program at the federal research facility of the Alaska Agricultural Experiment Station in 1949, emphasis regarding agricultural development in the Valley changed towards that of a commercial nature. It is worthy of note that again the concentration of institutional and agency programs was a direct corollary to the most productive period of development and production in the Matanuska Valley area.

A recent report (6) provides the results of an extended consideration of different types of settlement-development efforts and gives attention to both structured and unstructured types with experiences in the Matanuska Valley and Kenai Peninsula as illustrations. In the future, such programs must recognize the critical distinction between the part-time, homestead, or small commercial ventures, with their emphasis on the quality of life, and the potential large commercial production units, with primarily economic motivations. Programs directed to the former must emphasize aspects enhancing the social welfare of that group; while those intended for the latter must stress institutions and technology leading to rapid growth and transition to large-scale commercial agricultural industry.

Several recent reports (2, 3, 5) have concentrated on land use and potential for development in specific geographic regions and tended to validate the technical potential without, however, generating significant optimism or enthusiasm for future development. The facts imply that, although the potential for commercial agriculture in Alaska is extensive and varied, it would be naive indeed to expect a spontaneous reversal in attitude toward such possibilities until a major effort is directed to a public rural development infrastructure which includes agriculture in its goals and policies.

The recent University of Alaska — OHM, Inc. Cooperative Project (6, 8) served to bring forth an awareness of the inadequacy of existing information, technology, and service programs to meet the needs of current and future agricultural development in Alaska. This can best be illustrated by needs which have not been satisfied by public inputs and service programs. They include most present and planned large scale farming efforts, modern greenhouse and growth factory projects, and pending Native resource development projects.

Further illustrations of present voids and gaps have been documented in *1973 Alaska Revegetation Workshop Notes* (9). Review of Federal-State Land Use Planning Commission reports will substantiate the inadequacy of data to plan future agricultural land needs and locations. Even fewer data, on modern controlled-environment agricultural enterprises, are available for planning or development purposes.

In summing up, one can only conclude that development of commercial agriculture, or of a commercial agricultural industry in Alaska, has not yet been included in national or state goals or policies. Only during assessment of the most recent period has concern been directed to a comprehensive agriculture as a major land resource development alternative. Even more recently, concern has been directed toward development of philosophical and conceptual alternatives for socio-economic and agricultural development directed to the desires and demands of Alaska's rural and urban residents (7).

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Previous Publication of Series:
CREATING A NORTHERN AGRICULTURE
*I. An Agricultural Development
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