Call number: 00-00-168 SIDE B PT. 1

Charles Keim Speaking to the Regents, 1/9/1970

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Date(s) of creation of summary: 3/4/2013, 3/8/2013

Notes: Originals on 7 inch reels. Master and circulation copies on CD.

Series: Board of Regents' meeting series

A man is speaking about meat, milk and vegetable production and demand in Alaska. He refers to a graphic aid and talks about numbers of animals on a farm, value, pounds of meat, demand, and the Census Bureau's estimate of population. He says that in order to produce the amount of meat he is discussing, $9,000,000 worth of harvested forage, 5.5 million worth of barley and oats, and range for 182,000 animal units (a cow and a calf or the equivalent) is required. Each one of these requirements can be met with the land in Alaska. Alaska does not have a tremendous amount of land suitable for farming, but it has got plenty.

He goes on to discuss milk production with the help of a graphic aid. He figures for how many millions of pounds of milk are consumed now and imported in Alaska as well as figures for what could be consumed in 1985, assuming more people and less milk consumption per person. He says that in order to produce this amount of milk, 11,000 cows will be needed. They will be 137 herds of 80 cattle each, approximately twice the size of the average herd at present. He says one cow produces about $1,000 worth of income a year and it costs about $500 to feed a cow. There have been cows in Alaska which produces $1,500 net profit. Cows sometimes produce of 20,000 pounds of milk per year.

The speaker moves on to the subject of fruit and vegetables. He says there is a tremendous vegetable deficit right now. He refers to his graphic aid for figures on the demand for vegetables, and, if we produced it all, the value at present. He says that small fruit is practically zero right now, but that people are buying fruit at high prices in stores. He estimates that in 1885, people will be buying $600,000 worth of strawberries, $100,000 worth of raspberries as well as cranberries and other types of fruit including fruit plants people buy to put in their garden. This totals to something of a million dollars.

The speaker explains that strawberry plants live only 1 1/3 years on average. Then the fields are plowed up and replanted with new plats. The strawberry farmer buys the replacement plants from a nursery. Alaska could grow these replacement plants for export. Alaska has the advantage that it lacks many of the insects and diseases so that in disease free plants could be shipped with practically no soil. The speaker says that up to $18,000,000 worth of strawberry plants could be exported. The speaker says this is wild thinking, but there is no reason why it could not be technically feasible.

Next, the speaker discusses ornamental plants like Christmas trees, bedding plants, lawns, cut flowers. Currently there is a market for bedding plants but the plants are brought in from outside and typically are not adapted to Alaska. This may be worth up to $12,000,000 in 1985. This is just in private home. At

least as many plants may be planted in parks and public places, potentially making this a very large industry.

The speaker shows slides of plants, including asters, nugget bluegrass, apples, and potatoes. He explains that because Alaska does not have the problem with the aster yellows disease that California does, Alaska could do a better job of growing asters that California.

The speaker shows slides of gardens. Gardens have personal and sentimental value that one cannot put monetary value on. Gardens may or not be prudent in economic terms, but they may provide great amounts of enjoyment and pleasure. People all over Alaska have gardens, There are other values besides money, the speaker says.

In order realize the potentials of the economic opportunities the speaker has been talking about, many things are required beyond the experiment station including land, financing and farmers. Regarding land, the speakers says that some of the best land for agriculture in Alaska is now being occupied by things like fairgrounds and gas stations. This is a matter for the legislature.

Research is also required, and that is a matter for the University. He gives an example of research: Ten years ago dairy production in the Matanuska Valley was about 6-7,000 pounds of milk. This low production was due to the breed of cow being used being unsuited to Alaska, poor diet and from deficiencies of nutrients and minerals such as cobalt. At present, the average production is about 10,000 pounds and the average at the experiment station is 13,000 pounds, with one cow producing 21,000 pounds. The research station can claim a considerable amount of credit for that improvement. There are many other areas in which research is needed and improvement is possible.

The speaker points out that the wild Alaskan grasses are killed by continual grazing as they are not adapted to it. Other types of grass are being experimented with.

The speaker gives a brief history of the station. The United States Department of Agriculture started the station in 1898. There were stations in Sitka, Copper Center, Rampart, Kodiak, Palmer and College. The first group that agitated for the formation of the University of Alaska were the people at the experiment station. It is fitting that the experiment station should be part of the University.

In 1947, the experiment station was taken away from the University. In 1943-'34 the federal government appropriated $39,000 for research and the station sold $28,000 worth of product. The Department of Agriculture was upset as the money was to be used only for research. In 1967, the station was returned to the University. Currently the station has 7.5 professional University of Alaska employees. The half man refuses to work in the summer, during which he homesteads. There is one unfilled position. There are seven federal employees attached to the station. They have an unfilled position, too. There are facilities at College, in the Palmer and Matanuska area and at Petersburg. There are special problems at Petersburg. The speaker would like to give a special report on these later.

The speaker discusses this year's budget request. An increase has been requested for rehabilitation of leaky buildings and dilapidated equipment inherited from the federal government and for commencing research into red meat. Research into red meat requires hiring a range management specialist, an economist, supplies, equipment and technicians. The speaker reads an excerpt on beef production from the Stanford research report on agriculture in Alaska.

The speaker speaking on funding and responds to the statement that the research station uses more state funds than any other department in the university. He explains that the station chiefly does applied research which is usually paid for by the people who benefit from it. The people that benefit from agricultural research are the people of the state.

The speaker shows a list of professional employees of a Rhode Island experiment station. It is the smallest state and has been farming for 300 years. They must not have had too many problems which they have not been able to foresee. He compares this with the employees of Alaska's experiment, the largest state with probably the most problems. Half are university employees and the other half are just loaned by the federal government. With the help of a graphical aid, the speaker elaborates on the staff of the employees and plans for expansion including research into red meat, vegetables, small fruits and ornamentals. He speaks about needed employees and main research centers in Fairbanks, in Matanuska Valley and in Kenai. This adds up to around 70 people and $4 million. Considering the figures on possible production, $4 million is a very reasonable figure. The speaker elaborates on how the staff would be organized.

With the help of an atlas, the speaker points out potential farming areas. He speaks about differing conditions in soil and climate in various parts of Alaska and proposed environmental survey and evaluation.

The speaker speaks of less typical agricultural studies such as research into re-vegetation along the pipeline, and into what is suitable for planting along highways.

He speaks on issues such as air quality and using solar energy in a more efficient way. Air pollution has wiped out agriculture in some places in the states. There is research into making angled beds so that plants grown in Alaska will receive light that is not at such a low angle. The speaker also mentions growing corn under sheets of plastic to take greater advantage of solar energy.

The speaker runs through many slides which illustrate different breeds of cows both suited and unsuited to Alaska, different types of grasses and the effects of grazing, greenhouses, area suitable for farming and phenology.

The speaker again speaks of funding issues. To the Board of Regents he says that the Board has always approved anything thy have asked for. Sometimes the amount of funding is less that what was hoped for, but this is not the fault of the Board or Regents. The speaker says he knows that the Board of Regents have gotten some letters saying, "Please, give the research station what it needs." The speaker has another letter he has been asked to deliver. The speaker reassures the Regents that this is not some sort of pressure campaign; it is just representative of the huge amount of interest in farming in the state of Alaska.

The speaker sums up the plan, saying that though there have been shanges and disagreements, this is a good final draft and a good idea of what is needed for the proposed project. The plan was produced with the help of each person [at the research station?]. The needed facilities would come to about $12 million.

An advisory committee met last summer and approved of the plan. This committee's members include a local greenhouse operator, Don McKee(?), who is a pork producer in Tanana Valley, Harland

Hamilton(?), who is a dairy farmer in Matanuska, Mac Sherrod(?), who is a vegetable producer in Matanuska Valley, Mrs. Atwood(?) from Anchorage, Larry Farnon(?) from Homer and Dr. Krauss who, for 42 years, was the associate director for the Ohio State agricultural experiment station.

The speaker reads another excerpt from the Stanford research report on agriculture in Alaska. The tone of the report is supportive of and optimistic for agriculture in Alaska.

The speaker says that the research station would like the Board of Regent's approval of the plan in general. They do not want to be tied down to the current draft, as the plan may change later, but they would like a statement of support. They would also like to change to name from an experiment station to an institute. He thinks that the research station could be home to other bits of the university that do not quite fit elsewhere and that the experiment station is capable of much more than it has been asked to do.

Another speaker takes the floor.

He says the Forestry Soils Laboratory was established at the University of Alaska in 1965 through a Hill foundation grant. Since that time the majority of funding has come from McIntire-Stennis Cooperative Forestry Research Act funds.

Through a cooperative arrangement with the U.S. Forest Service, the lab is located in the forestry sciences building, a federally owned installation that is part of the Institute of Northern Forestry Pacific Northwest Forest and Range Experiment Station. Two professional foresters have been in charge of the laboratory: Dr. Paul Heilman(?) assisted in establishing the laboratory in 1965 and left the university in 1967 and the speaker arrived in 1967.

At the present time, the laboratory employs three full time technicians; a chemist, a microbiologist and a general laboratory technician. One graduate student is employed half time.

The objective of the Forestry Soils Laboratory is to, through research and teaching, obtain and disseminate information pertaining to soil problems and their solutions in the major forest types of Alaska. However, the scope of problems associated with natural resource management in Alaska has resulted in the laboratory becoming associated with questions dealing with soil plant relations in most of the major soil vegetation zones in the state. Research emphasis during the first two years of laboratory operation dealt primarily with tree nutrition problems as related to the soil. Two professional articles were published dealing with black spruce nutrition on north slopes in interior Alaska. One master's degree in forest soils was granted on a problem dealing with the chemistry of fossil soils in southeast Alaska. Cooperative research was conducted by the lab on soil plant relations problems in cooperation with the Forest Service in southeastern Alaska. Present research orientation of the lab, while the same as in the past, recognizes that a type of activity organization is needed which considers all part of the forest environment including man, popularly called the ecosystem approach. The ecosystem approach answers the need for the understanding of the interrelationships between all parts of our environment and the wise management of all natural resources.

The ecosystem concept is a framework for the organization of the research activities. The lab is presently conducting experiments in birch, aspen, white spruce and black spruce forests which a

designed to measure biotic and abiotic or physical factors which are important in the development of these forest types.

Refers to illustrations in a handout which illustrate activities in which the laboratory is presently engaged. The speaker explains what equipment is in the illustrations, how the equipment is used, what information is obtained and how this information is useful. Illustrations include a typical experimental plot set up in a 120 year old aspen stand, equipment used to measure below-ground temperature, a weather shelter which houses instruments that measure temperature and humidity, a rain gauge, a neutron probe, power supply, litter screen, a diameter band. One illustration illustrates the response of a 10 year old aspen stand to fertilization in 1967 with nitrogen, phosphorus and potassium: namely, in 1968 and 1969 a 2.6 and 5.1-fold increase in diameter growth of the aspen. The height growth at the end of the 1969 season was 10-fold greater that unfertilized plots.

A strong laboratory experimental program is being maintained to support the field research. Physical and chemical lab analysis is used to characterize soil vegetation complexes in which fieldwork is being conducted. Lab experimentation is being used to confirm field measurements of biological processes and to carry out measurement of processes which are more readily measured by laboratory apparatus.

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