THE LAND GRANT UNIVERSITY SYSTEM IN THE UNITED STATES

EDUCATION + RESEARCH + OUTREACH
Food Security and Community Self Reliance

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WHY A LAND GRANT INSTITUTION?

- Protest against the dominance of the classics
- Develop instruction relating to practical, societal realities
- Offer preparation for the ‘professions of life’

“The land grant colleges were founded on the idea that a higher and broader education should be within reach of those whose destiny assigns them to, or who may have the courage to choose locations:

- where the wealth of nations is produced,
- where civilization unfolds its comforts,
- where people need wider educational advantages.

It would be a mistake to assume that every student should be a farmer or a mechanic when the design comprehended not only instruction for those, but such instruction as any person might need with ‘the world before them to choose’.

From: Senator Justin Morrill, 1887
WHAT IS A LAND GRANT UNIVERSITY?

The land grant university system in the United States is unique in the world with its integrated education, research, and outreach programs. It, and the federal U.S. Department of Agriculture’s Agricultural Research Service, has been the driving force that makes U.S. agriculture a world leader. But as society has evolved, the land grants’ importance is being overlooked. In a sense, we are the victim of our own success.

WHY THE LAND GRANTS ARE IMPORTANT

The land grant universities serve everyone today. Research and learning through formal education and outreach never goes out of style. There is a resurgence in interest in agriculture and horticulture as many urban refugees move to rural areas and stake their claim, as urbanites become more interested in healthy living, as those in rural areas see new business opportunities, and as we all become more concerned about our food security and food safety. Cooperative Extension and Experiment Station missions extend far beyond agriculture.
THE LAND GRANT CONTINUUM

• Private to public education
  Morrill Act of 1862
  Morrill Act of 1890

• Public education to agricultural research
  Hatch Act of 1874

• Agricultural research to public outreach
  Smith-Lever Act of 1914

• Recognition of need for forestry research
  McIntire-Stennis Act of 1953

• Recognition of Native American needs
  1994 Elementary & Secondary Education Reauthorization Act

A seamless continuum of education and basic research into translational research and outreach that leads to business and investment opportunities in the private sector world.
OTHER IMPORTANT EVENTS

NATIONAL

1922: Agricultural Research Service formed with a national and regional mission working hand in hand with the land grants.

ALASKA

1898: Alaska Agricultural Experiment Station established in Sitka

1906: Agricultural Experiment Station headquartered in Fairbanks

1917: Agricultural College and School of Mines opens in Fairbanks

1930: Cooperative Extension Service becomes a part of College

1935: College becomes University of Alaska

1948: Agricultural Research Service comes to Alaska in Palmer

1996: Ilisagvik College established in Barrow
IN ALASKA TODAY

1975: School of Natural Resources and Agricultural Sciences established at the University of Alaska Fairbanks with its research arm the Agricultural and Forestry Experiment Station, headed by a Dean of the School and Director of the Station

2008: Cooperative Extension Service that has been a part of the College of Rural and Community Development is placed under the University of Alaska Fairbanks Office of the Provost and is headed by a Director of Extension and Vice Provost for Outreach
FOCUS AREAS OF THE COOPERATIVE EXTENSION SERVICE, AGRICULTURAL AND FORESTRY EXPERIMENT STATION, AND SCHOOL OF NATURAL RESOURCES AND AGRICULTURAL SCIENCES

- Agriculture and Horticulture
- Health, Home, and Family Development
- Natural Resources and Community Development
- 4-H and Youth Development
- Energy
- Climate Change
- Food and Agricultural Security
- Education of the 21st Century Workforce
CONTRIBUTIONS OF THE UNIVERSITY OF ALASKA FAIRBANKS

1898 – 1998: 100 years, Agricultural and Forestry Experiment Station
1906 – 2006: 100 years at the Fairbanks Experiment Farm
1916 – 2016: 100 years at the Matanuska Experiment Farm
1930 – 2030: 100 years of the Cooperative Extension Service in Alaska

In partnership with the Agricultural Research Service and outreach of the Cooperative Extension Service, close to 50 varieties of new plants have been introduced in Alaska.

The Experiment Station and the Cooperative Extension Service have worked with diverse animal breeds including dairy cattle, beef cattle, reindeer, yak, muskoxen, elk, and bison.

The Experiment Station and Extension have been active in energy work, nutrition, youth development, home economics, land planning, applied economics, forest management, outdoor recreation, childhood development, law and policy, and community and business development.
PEONIES

- Field trials
- Best management practices
- Variety selection
- Shelf life
- Economic feasibility

- International marketplace
- Commercial production
- Home production

- Formal courses and workshops

- Alaska Peony Growers Association
- Interior Peony Growers LLC
SPORTS TURF

• Variety selection
• Fertilization practices
• Sports field bed construction
• Sports field bed media
• Irrigation
• Pesticide application

• Golf greens and fairways
• Putting course and golf course
• Soccer fields
• Airport runways

• Golf course and turf management workshops
• Golf course demonstrations
REINDEER

- Herd nutrition
- Reproductive biology
- Herd management
- Slaughtering
- Meat quality
- Marketing

- Ranged herds on the Seward Peninsula
- Ranched herds on the road system
- 4H showmanship

- Reindeer Research Program
- Kawarak Reindeer Herders Association
- Alternative Livestock Association
ALASKA BERRIES

• Biomedical research
• Neutraceutical applications
• Chemical components
• Field culture

• Fresh, frozen, dried, powdered markets
• Processing into candies, teas, powder, crystals

• Alaska Berry Growers
• AlaskaBlue
• Alaska Pure Berry
SCHOOL OF NATURAL RESOURCES AND AGRICULTURAL SCIENCES
AGRICULTURAL AND FORESTRY EXPERIMENT STATION
COOPERATIVE EXTENSION SERVICE
TANANA CHIEFS CONFERENCE
KENAI NATIVES ASSOCIATION
GENERAL ELECTRIC
NASA

**CONTROLLED ENVIRONMENT AGRICULTURE**

- Vegetable production in controlled environments
- Shelters to extend growing season
- Greenhouses to operate year-round
- Totally controlled buildings with efficient energy use

- Controlled Environment Agriculture Laboratory (CEAL)
- Pikes Waterfront Lodge
- Chena Hot Springs Resort and Chena Fresh
- Rural communities on the Yukon River
GRAINS, GRASSES AND OILSEEDS

- 4 wheat varieties
- 9 grass varieties
- 2 oat varieties
- 5 barley varieties

- Breeding
- Best management practices
- Variety trials
- Conservation tillage

- Interior Alaska feed producers
- Food producers and milling applications

- Division of Agriculture – Plant Materials Center
- Alaska Farm Bureau
- Alaska Soil and Water Conservation Districts
Biomass

Biomass Production
Biomass Processing

• Field cultivation of woodies, oilseeds, grasses
• Estimation of growth on cleared lands
• Liquification and gasification of biomass
• Biomass products for energy and byproducts
• Vehicles and generators operate on new generation of fuels

• Education programs in southcentral and northwestern Alaska
• National Academy of Sciences participation

• Biomass Research and Development Laboratory
• Matanuska-Susitna Community Campus
• Chukchi Campus
FOREST PRODUCTS

• Wooden swifts for spinning
• Bassoons
• Teas
• Dimension lumber
• Gluelam products
• Composites
• Education in use of forest products
• Marketing workshops

• Bluster Bay
• Alaska Supernatural Teas
• Alaska Blues
• University of Minnesota Duluth
The Alaska land grant system, as every land grant system in the United States, has touched every state resident with specialized crops, adapted livestock, appropriate healthy living, youth leadership and much more. Without it and the USDA Agricultural Research Service, it is doubtful that Alaska’s agricultural industry, though small, would exist.

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