Alaska (University of Alaska Fairbanks) Plan Of Work - FY2024

Review Report

Contributing Organizations

University of Alaska Fairbanks

Directors

Jodie Anderson Signed

Executive Summary

Overview

Alaska is recognized for its immense size and sparse population and its cultural, geographic and environmental diversity. The state represents a major region of renewable and nonrenewable natural resources in the United States. Its 365 million acres include the nation's largest oil reserves, coal deposits and the two largest national forests. Alaskans harvest many non-timber forest resources including berries, mushrooms, saps, oils, chaga, roots, wildflowers and more. Alaska has a diverse geography that offers soils for production of food, fiber and biomass fuels as well as a multitude of recreational and tourism activities. The vast stretches of boreal forest offer insight into arctic ecology, tree growth trends and the effects of climate change.

Alaska's natural resources continue to be the foundation of the state's economy, though resource industries have been mostly extractive in nature. IANRE assumes the use and management of these resources will continue to be a predominant force in the FY24 needs of Alaskans. Promoting awareness and stewardship of Alaska's natural resources is therefore central to the FY24 planning of IANRE's teaching, research, Extension and engagement programs. The University of Alaska Fairbanks (UAF) in general and its Agricultural and Forestry Experiment Station (AFES) and Cooperative Extension Service (CES), in particular, are looking forward to meeting the challenges of increasing demands for research, education, outreach and community engagement that are relevant to sustainable management of Alaska's resources and bring community ideas to the university for further development of the state's resources.

In FY24, Alaska is projected to continue importing a high percentage of foods and other agricultural products. The small scale of local markets mean emerging growers in the agricultural sector will continue to need support producing and marketing potatoes, specialty crops and herbs; cut flowers including peonies; vegetables and herbs; forages, grains and manufactured livestock feeds; controlled environment products, and a variety of niche market crops. Livestock enterprises in Alaska are varied in size and species of animal in production. In FY24, producers are expected to request information specific to northern latitudes that will both protect the environment and ensure an abundant and safe food supply for both humans and animals.

The Alaska Department of Labor and Workforce Development projects that Alaska’s population will increase by almost 25,000 people by 2050. As the population grows, more locally and regionally produced food will be needed to provide greater food security. Many Alaskans live a subsistence lifestyle or supplement their diets with fish and game meat. Alaska also has a large military population, and most have not previously preserved game meat or fish. Alaska has one of the nation's highest rates of botulism, so it is imperative to continue providing much-needed information on safe preservation of dietary staples in FY24. Alaska also has one of the fastest growing senior populations, which faces the challenge of remaining active and healthy in a demanding environment. Other concerns that are expected to define health and nutrition programming in FY24 are continued high rates of child and adult obesity and diabetes. Due to high levels of fine particulate matter that occurs during Alaska’s cold winters, and high levels of radon detected in some areas, indoor air quality will also remain a particular Alaska concern.

High energy costs remained a critical issue, particularly in rural Alaska, where fuel oil continued to run $8 or $9 a gallon. Research and outreach plans in FY24 related to energy will continue to focus on new and alternative sources of energy, wood and biomass and energy conservation. AFES will work to provide information to manage renewable resources and to improve technology for enhancing the economic well-being and quality of life at high latitudes. When foresters, farmers and land managers use research results, all Alaskans benefit from the wise use of land resources. Research projects are therefore expected to respond to requests from producers, industries, and state and federal agencies for information on plant, animal and soil sciences, forest sciences and resources management.

AFES priorities, like national priorities, are to enhance sustainability of food and agricultural systems; adapt to and mitigate the impacts of climate change; support energy security through the development of renewable natural resources; ensure a safe, secure and abundant food supply; improve human health, nutrition and wellness; support environmental stewardship through the development of sustainable management practices; and strengthen individual, family and community development and resilience. Experiment station researchers plan to continue publishing research in scientific journals, conference proceedings, books, and in experiment station bulletins, circulars, newsletters, research progress reports and miscellaneous publications. Scientists will their findings through conferences, public presentations, workshops, field days and mediated platforms like websites and blogs to reach a wide audience.

The mission of CES is to use research-based knowledge to educate, engage and support the people and communities of Alaska, connecting them with their university. In FY24, CES plans to continue providing factual and practical information while bringing Alaskans' issues and challenges to the university. CES is committed to promoting the sustainability and economic security of individuals, families and communities by providing practical, nonformal education, including conferences, workshops and cooperative work with community, regional and tribal partners. Outreach will occur through numbered publications, faculty consultations, newsletters, blogs and social media platforms like Instagram, Facebook pages, YouTube channels and Twitter feeds.

CES priorities will continue to address expected national priorities in FY24 by helping families, youth and individuals be physically, mentally and emotionally healthy; enhancing workforce preparation and life skills; strengthening food safety and security; and fostering greater energy independence. Programming is planned to integrate cultural and ethnic diversity responsive to emerging stakeholder needs and interests. Programs will be informed by client requests, various regional and subject matter advisory groups, surveys and needs assessments. Collaborations are planned to continue with other universities and with other units within UAF, the University of Alaska statewide system, federal and state agencies, nongovernmental organizations and private industry.

Stakeholders to be consulted in FY24 include K-12 students, higher education students, researchers, individuals, businesses, industry, government, nongovernmental organizations, and families and communities throughout Alaska, the circumpolar North and the nation. The combined efforts of AFES and CES are intended to bring the university to Alaskans while bringing community concerns and issues back to the university. State-defined critical issues link specific public needs with our broad mission in order to allow the concentration of resources (money and people) that promoted high-quality work. Critical issues will be used to provide guidance for faculty, staff and administrators to direct current and new programs and find or retain faculty expertise.

Critical Issue: 4-H & Youth Development

Research shows that youth need sustained, healthy relationships with adults in order to thrive. Alaska Extension plans to continue to promoting positive youth development through education with a focus on leadership skills, using the 4-H mission mandates of science, citizenship and healthy living. Organized 4-H clubs, school enrichment programs, after-school activities and summer camps are methodologies through which educators and leaders plan to achieve youth development goals in FY24.

The focus of Alaska's 4-H program has been supporting the healthy maturation of youth from childhood to adulthood. Training throughout the state, promoting life skills and using the 4-H model of youth development will continue to be the foundation of FY224 youth development programming.

Critical Issue: Agriculture & Food Security

Alaska imports over 90 percent of foods and other agricultural products consumed in the state. Growers' products are primarily for in-state consumption and use, including fresh market potatoes, forages, grains and other livestock feeds, greenhouse flowers and vegetables and a variety of "niche market" crops and products. Commercial horticulture includes cut flower and peony production, greenhouse operations, turf management, lawn maintenance and sod production. Proper knowledge and planning of soil-disturbing activities can prevent major impacts on other resources. In FY24, based on stakeholder feedback, IANRE will have a larger focus on soil health work including soil amendments.

Identification and education of food leaders across Alaska through the Local Food Leader training program, developed at Iowa State University Extension, is a pathway to local food security. Equipping food leaders to work toward equitable, sustainable, and balanced local food structures results in increased food security and healthy food systems. IANRE plans to continue partnerships with groups like the Alaska Food Policy Council, the Alaska Farmers Market Association, and the State of Alaska Division of Public Health.

Animal enterprises in Alaska include dairy, beef, swine, reindeer, poultry and nontraditional livestock such as muskox, yak and bison. Agriculture researchers in Alaska plan to continue investigating areas of animal agriculture, home animal production, agronomic crops including oil seeds and cover crops, and home and commercial vegetable production. Agricultural soils, fertilizer and compost research and outreach are also part of this program area. IANRE provides pesticide applicator certification courses and Master Gardener courses. Alaska Extension’s statewide Integrated Pest Management (IPM) education program has operated since 1981, and technicians plan to continue site visits in FY24 to assist individuals in understanding invasive pests and control options.

Critical Issue: Healthy Individuals, Families & Communities

Concerns for Alaskans in FY24 continue to include high rates of obesity and recurring food safety issues such as botulism. Nutrition outreach addressed childhood obesity with nutrition education in after-school programs and nutritional programs in community venues as well as cooking programs that emphasized preparing healthy foods.

Food safety programming planned for FY24 will encompass food preservation, safety, and preparation. Food safety education will utilize various resources and strategies to ensure that all types of foods, including Indigenous foods, are properly stored, prepared and preserved so that food is safe for consumption. IANRE will continue to offer Certified Food Protection Manager courses as well as workshops on standard preservation methods like canning, pickling, drying, fermenting, and freezing. Rural locations will be supported by the maritime Extension program, which continues to plan routes that will bring canner gauge testing and preservation education to remote communities by boat.

Home and energy Extension programming will address indoor air quality, home maintenance and repair, energy use and conservation. Emergency preparedness is expected to impact such areas as families and communities responding to natural and man-made disasters. The state records frequent earthquakes, flooding and other natural disasters, which underscores a need for emergency preparation education in FY24 as well as periodic radon testing related to ground shifts.

Training is planned with youth, teachers, 4-H leaders, youth group organizers, parents and community partners to provide techniques for working directly with youth in the area of nutrition and physical activity. StrongPeople groups and diabetes education are planned to help community members increase their physical activity and manage chronic illnesses.

Critical Issue: Natural Resources, Ecosystems & Sustainable Energy

Communities increasingly depend on Alaska's natural resources for viable economic development. Policies to sustain this growth that mirror sociological and technological change will be critical. Major Alaska resource development activities have been centered in the oil and gas industries. Headquarters for these industries are located in the urban centers where there is access to transportation and advanced communication systems. However, urban communities still need to build infrastructure to fully engage in value-added activities that would enhance development of nonpetroleum industry. In FY24, Extension plans to continue offering demonstrations of both solar and biomass options to assist communities in exploring alternative energies.

IANRE will also continue outreach to underserved populations in rural areas to support real options for economic development and improved quality of life. Outreach addressed stakeholder needs for unbiased, science-based information about natural resource management issues in forestry, mining, water, recreation and alternative, sustainable energy sources.

The economic potential of Alaska's forests is under-realized in timber and nontimber products. The forest ecosystem and agricultural lands can play a role in diversifying the economy of Alaska. Concern for the health and survival of resource biodiversity is expected to remain a central issue in resources management in Alaska and elsewhere. As energy continues to become a growing concern throughout the world, the boreal forest has the potential to provide products necessary for fuel alternatives to petroleum and coal. Some Hatch projects in FY24 will continue to investigate how best to utilize Alaska’s lands.

Merit and Scientific Peer Review Process

IANRE's new director updated the review process for research project proposals such that primary investigators must submit a list of four to six potential external reviewers. This raised the minimum number of reviewers from three to four.

Stakeholder Input

Actions to seek stakeholder input that encourage their participation

IANRE's new director will be visiting at least 15 different communities in multiple regions across Alaska in FY23-24 for listening sessions.

Methods to identify individuals and groups

IANRE will continue its website redesign, resulting in improved digital accessibility and feedback opportunities for stakeholders utilizing assistive technology.

Methods for collecting stakeholder input

No significant changes.

A statement of how the input will be considered

IANRE has established a steering committee that will meet through FY24 to improve its internal processes including external visibility, community responsiveness and program planning.

Critical Issues

Active

4-H & Youth Development

Last Updated: 2024

Initiated on: 11/26/2019

Term Length: Long-term (>5 years)

Research shows that to increase resilience and reduce risky behaviors, youth need connections to caring adults. Faculty and staff will continue to provide programming to youth focused on achieving the outcomes described in the 4-H Thriving Model. CES seeks to increase participation in STEAM activities as well as provide youth with local and statewide opportunities for community involvement. 4-H educators will continue to offer culturally relevant activities for the many diverse groups in Alaska while providing learning experiences relevant to the national mission mandates of science, healthy living and civic engagement.

Science Emphasis Areas: Education and Multicultural Alliances, Youth Development

Research Projects: 0

Extension Programs: 1

Active

Agriculture & Food Security

Last Updated: 2019

Initiated on: 11/26/2019

Term Length: Long-term (>5 years)

Alaska's agricultural opportunities and their relationship to food security are a critical issue because Alaska imports over 90 percent of its food. To become adaptable to economic, climate and other changes, it is critical to provide support to growers in the state. CES and AFES are well positioned to provide information about high-latitude agriculture and horticulture. Areas emphasized in the close collaboration of CES and AFES include agronomic crop and livestock production, commercial and home horticulture best practices, new technology applications, IPM and control of invasive pests, youth involvement in agriculture, best practices for controlled environments small-scale agribusiness, and cultivar testing for climate-adapted crops.

Science Emphasis Areas: Agroclimate Science, Sustainable Agricultural Production Systems

Research Projects: 18

Extension Programs: 1

Active

Healthy Individuals, Families & Communities

Last Updated: 2019

Initiated on: 11/26/2019

Term Length: Long-term (>5 years)

Alaska faces challenges such as high rates of botulism, obesity, food insecurity and other risks to public health. Cold climate housing also presents challenges in balancing fresh air flow with energy conservation. To address such concerns, CES faculty and staff will offer educational opportunities regarding nutrition and physical activity, chronic disease prevention and management, home modifications, air quality and energy efficiencies, food safety practices and food preservation techniques.

Science Emphasis Areas: Family & Consumer Sciences, Food Safety, Human Nutrition

Research Projects: 0

Extension Programs: 1

Active

Natural Resources, Ecosystems & Sustainable Energy

Last Updated: 2019

Initiated on: 11/26/2019

Term Length: Long-term (>5 years)

Collaborative efforts are key to ensuring proper stewardship of Alaska's complex ecosystems. CES and AFES faculty and staff will maintain partnerships and participate in multistate and integrated activities with stakeholder groups, government agencies and other institutions that enhance outreach regarding natural resource management and renewable energy sources. Faculty and staff will work to expand capacity for public involvement in natural resource, ecosystem and sustainable energy issues, including maintaining online platforms for education and engagement. Public workshops, presentations and consultations will offer opportunities for stakeholders to increase their awareness of biomass and other sustainable energies.

Science Emphasis Areas: Bioeconomy, Bioenergy, and Bioproducts, Environmental Systems

Research Projects: 5

Extension Programs: 1

Report Status

Approved as of 07/28/2023

Comments

Executive Summary

The Executive Summary provides a good overview of the vast natural resources available in Alaska. The challenges and priorities for Alaska and the Institute of Agriculture, Natural Resources and Extension (IANRE) are well-documented. The four Critical Issues remain unchanged for FY24. We appreciate the overview of the critical issues and the brief description of stakeholder engagement to establish priorities.

Merit and Scientific Peer Review/Stakeholder Input

The Merit review and Stakeholder Input processes include strategic enhancements by the new Director. For example, research project proposals will require additional external reviews. Also, the new Director will be conducting listening sessions in 15 different communities. These new efforts are to be commended.

To adequately evaluate these sections, NIFA had to review the FY23 POW for the comprehensive description of the Merit review and Stakeholder Input processes. For future POWs, please include the full description of the processes along with any updates.

Critical Issues

IANRE did a great job of identifying critical priorities impacting the citizens of Alaska and developing relevant programs and research projects to address those challenges. IANRE is to be commended for the intentional coordination between Extension and Research faculty and staff on efforts relate to agriculture and natural resources. NIFA also acknowledges other important efforts impacting the citizens of Alaska, such as 4-H, food safety, and nutrition/well-being.

General Comments and Recommendations

The Alaska Annual Report is informative and well-written. IANRE is to be commended for their level of community/stakeholder engagement and visibility. The programs continue to address the needs of a wide audience, including youth, farmers, families, individuals, and policymakers. The programmatic efforts reflect good partnerships and collaborations.

Please consider the following recommendation.

- Future POWs should include a comprehensive description of the Merit and Scientific Peer Review and Stakeholder Input processes. These processes may not change each year. Consequently, the processes can be cut/pasted from the previous year along with any updates.