

**PLAN OF WORK  
2000 - 2004  
UNIVERSITY OF ALASKA FAIRBANKS  
ALASKA COOPERATIVE EXTENSION**

**I. Preface and Authority**

The Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA), Public Law 105-185, amended the Hatch Act of 1887, the Smith-Lever Act, and sections 1444 and 1445 of NARETPA to require plans of work to be received and approved by CSREES prior to the distribution of the funding authorized under these Acts. The collection of information will satisfy the plan of work reporting requirements as imposed by these Acts. This collection of information includes three parts: the submission of a 5-year plan of work every five years, the submission of an annual update to the 5-year plan of work, if applicable, and the submission of an annual report of accomplishments and results.

**II. Submission of the 5-Year Plan of Work**

**A. General**

**1. Planning Option:**

The Alaska plan is submitted as an individual plan covering the activities of the Alaska Cooperative Extension. (The Agricultural and Forestry Experiment Station has also submitted their research plan individually.)

**2. Period Covered:**

October 1, 1999 through September 30, 2004.

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**Planned Programs:**

The University of Alaska Fairbanks Alaska Cooperative Extension (UAF/ACE) provides non-formal Extension education in agriculture, forestry, land resources management, 4-H

youth development, and home and family living that assists in economic and environmental sustainability and protection of living systems, and assists Alaskans in being a healthy, well-nourished population with a sustainable and viable quality of life - especially for rural residents. ACE disseminates scientifically based research knowledge to its stakeholders who include landowners and others involved in the development of land resources in Alaska, rural Alaskans, Alaskan youth and families, the Western Region, and the nation. These efforts are jointly funded by federal formula funds, state matching funds, state and federal grant funds, and other private funding sources.

Function \_\_\_\_\_ Goal 1                      Goal 2                      Goal 3                      Goal 4                      Goal 5  
1862 Research (AFES Plan submitted separately)

1862 Extension 5	Program 1 11 Projects	Program 2 10 Projects	Program 3 8 Projects	Program 4 8 Projects	Program 5 9 Projects
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**GOAL 1. AN AGRICULTURAL SYSTEM THAT IS HIGHLY COMPETITIVE IN THE GLOBAL ECONOMY.** Through research and education, empower the agricultural system with knowledge that will improve competitiveness in domestic production, processing and marketing.

Program 1: To produce new and value-added agricultural and forest products and commodities.

**Statement of Issues:**

Since 1975, the Alaskan economy has been dominated by activities related to development and production of oil. Other resources contributing to lesser degrees are fisheries, mining, tourism, timber, and agriculture. As oil production approaches its finite limits, economic diversification is becoming an ever increasing topic of conversation in the legislature and the halls of private sector businesses. Alaska’s location relative to the Pacific Rim and Asian markets makes export of agricultural and forest products of significant interest.

Currently, Alaska imports a high percentage of foods and other agricultural products consumed in the state. Growers in the agricultural sector produce products primarily for in-state consumption and use including fresh market potatoes and vegetables, forages, grains, and other livestock feeds, greenhouse vegetables, flowers, and ornamentals, and a variety of “niche market” crops. Animal enterprises include dairy, beef, swine, reindeer, and alternative game animals such as musk-ox, elk, and bison. Export markets which are relatively small at present consist of reindeer meat and antler, grass seed, seed potatoes, and forest products (primarily raw logs and wood chips). As Alaska expands its in-state consumption and export markets, our producers will require increasing access to research derived information specific for our northern latitude environment as well as adoption of knowledge derived from research in other states. Extension priorities will be determined by joint collaboration with faculty, our state and district advisory councils, agricultural and forestry producers, rural and under-served Alaskans, Native Alaskans, Alaskan youth, and other members of the public in general. (The term under-served is defined at the end of this document.) In 1998/99, we met with the following stakeholders to assess Extension priorities for this program:

- Statewide Extension Advisory Council
- Alaska Farm Bureau
- Potato and vegetable growers
- Greenhouse and Nursery Operators
- Reindeer Herders Association
- Alaska Forest Association
- Alaska Livestock Producers

**Performance Goal:** To annually increase the total new, value-added or total dollar value of agricultural and forest commodities and products for domestic and foreign markets.

**Key Program Components:**

Enhanced profitability of agricultural and forest production methods.

- Provide growers with research based information to increase Agronomic and Horticultural Crop Production through improved soil and pest management.
- Address the needs for Greenhouse/Nursery Production and marketing of commercial crops and native Alaskan plant materials currently not grown in Alaska.
- Assist growers with research based information on Pest Management/Biocontrol.
- Address the needs of growers of Traditional and Alternative Livestock Production.
- Provide research based information on the production of domestic and export markets for Alaska Forest Products by providing linkages to other land grant universities such as Oregon State University, the Alaska Department of Natural Resources and the USDA Forest Service and UAF researchers.
- Assist Alaska grower groups, the Alaska Division of Agriculture and other private and governmental organizations in Marketing of Alaska Grown Products.

**Program Projects:**

- 1a Assist grower organizations, other units of the University of Alaska and other organizations in the development of export and domestic markets for such specialty markets as bison, elk, reindeer and musk ox meat and by-products and seed potatoes.
- 1b Assist horticultural and agricultural producers in identifying, producing and marketing crops currently not produced in Alaska for both domestic and export markets.
- 1c Assist agricultural and forest commodity producers to increase the consumption in-state of Alaskan grown and manufactured agricultural and forest commodities.
- 1d Assist small full-time and part-time agricultural producers in Alaska to annually increase their total dollar revenues from on-farm activities.
- 1e Provide Extension educational programming to assist agricultural, horticultural and forest producers in the production, harvesting and marketing of new products, uses and commodities from Alaska native plant materials.

- 1f Disseminate research based information concerning agronomic and horticultural crop production in high latitude environments as related to such factors as soils, photo period and temperature.
- 1g Assist agricultural and horticultural producers to increase the annual production yields through improved soil management practices through on-farm demonstrations, test plots and grower contacts.
- 1h Develop and deliver research-based Extension information on forest health issues to Alaska landowners, particularly as relates to global climate change and forest stand management.
- 1i Assist Alaska greenhouse growers in extending the growing season for commercial production of vegetable crops and bedding plants.
- 1j Assist agricultural, horticultural and forest commodity producers in identifying and managing new, exotic, invasive pests.
- 1k Involve youth in new and value-added agriculture, horticulture and forest production systems through 4-H, Future Farmers of America and related youth programs.

#### **Output Indicators:**

- Continued revision on a three-year cycle of Extension publications addressing agricultural and forest commodity production and marketing needs and develop new publications to address emerging needs.
- Increase the number of grants and contracts that will increase agricultural competitiveness of Alaska agricultural producers by addressing concerns regarding availability of working land for small farms, protection of water resources, pest management, nutrient management and production practices for Alaskan crops and forest commodities.
- Provide contact hour information on Extension outreach and service to Alaska agricultural and forest commodity producers through workshops, conferences, small group and individual consultations.
- Quantify the number of youth involved in Extension activities focused on new and value-added agriculture, horticulture and forest commodity production.
- Annually provide impact statements/success stories resulting from Extension educational programming directed toward this goal.
- Annually provide statements, testimony and/or evaluations from recipients of Extension educational activities.

#### **Outcome Indicators:**

- Document stakeholder impacts resulting from adoption of practices, techniques and information provided by Extension educational programming.
- Increased income to agricultural, horticultural and forest commodity producers resulting from information and practices provided by Extension activities.
- Costs avoided by producers as a result of adoption of practices taught through Extension educational activities.

- Consumer impacts (i.e. Food Quality, Environmental Quality) documenting increased acceptance and consumption of Alaska grown and produced agricultural, horticultural and forest commodities.
- Increased acceptance by targeted youth of the potential economic, educational and career opportunities in new and value-added agriculture, horticulture and forest management.

**Internal and External Linkages:**

Internal linkages include collaborative work among Extension educators with the Alaska Cooperative Extension, researchers from different departments within the School of Agriculture and Land Resources Management and Agricultural and Forestry Experiment Station, and with other units of the University of Alaska. External linkages will continue with other Western Extension systems, federal and state agencies, private sector stakeholders, and the public. Linkages will include collaborative research and outreach, seeking advice on Extension educational programs, and extending research-based information to users.

**Target Audiences:**

The target audiences are Alaska producers of agricultural and forestry products, consumers, other researchers and extension agents and specialists, and under-served populations. Special attention will be given to the geographically disadvantaged in remote areas of the state.

**Program Duration:**

The program addressing National Goal 1 consists of 11 projects. These projects are all of moderate duration (5 years). Because of rapid changes in Alaska's economy and the need for Extension educational programs to be both reactive and proactive to stakeholder needs, changes in projects over a five year period are likely to occur. These will be dealt with through possible amendments to the plan if the new projects significantly alter the approved plan of work.

**Allocated Resources:**

	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
<b>Federal</b>	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>
State Match	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>	<b>\$371,154</b>
FTE's	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>

**GOAL 2: A SAFE AND SECURE FOOD AND FIBER SYSTEM.** Improve access to an affordable, healthful and culturally relevant food supply, and improve food safety by controlling or eliminating food borne risks.

**Program 2: To increase consumer awareness, understanding, and information on food accessibility and affordability, and on food safety.**

**Statement of Issues:**

There is a rapid change in the diets of Alaskans. This has resulted from increased availability of foods from outside sources and from a decrease in the use of customary foods such as wild game, fish, berries, greens and bulk purchases. This change has created new food safety and preservation challenges.

The harvesting of locally produced foods as well as wild game, fish, berries and greens remains a priority in Alaska Extension programs, and an increase in clientele demands in this area is anticipated as Welfare Reform impacts Alaska's rural communities. Consequently the Alaskan public in both rural and urban settings is demanding a greater understanding of food safety risks and the tools to reduce food borne hazards in their homes.

Food preservation workshops remain a major vehicle for bringing safe food preservation practices to communities throughout Alaska. Internet services and Extension materials on CD-ROM can provide workshop follow-ups, information updates and inexpensive access to Extension faculty. The National Restaurant Association's (NRA) manager certification course and employee training programs will continue and a consumer education program will be identified for use statewide.

**Performance Goal:** To annually increase the awareness, and understanding, and enhance behavior of consumers regarding food accessibility and affordability, and regarding food safety and food borne risks and illnesses.

**Key Program Components:**

- Improved access to an affordable, healthful, and culturally relevant food supply through developing and disseminating knowledge about the storage of indigenous foods, along with safe food preservation classes, updating publications, and continuing access throughout the state via a toll free food safety and food preservation hotline.
- Introduction of Internet services and CD-ROM applications that will create opportunities for remote interactive educational services.
- Food safety instruction to food service managers, employees, and consumers.
- Coordination of 4-H youth information on the preservation of Alaska fish, game, and produce as well as projects in consumer education.

**Program Projects:**

- 2a Increase knowledge of safe preservation methods that allow storage of indigenous foods for future use, through food preservation classes, updated and new publications, and via the toll free food safety and food preservation hotline.
- 2b Revise and expand the food cost survey, identifying additional funding.
- 2c Develop a cost of living survey.
- 2d Introduce internet and CDROM applications on food safety and preservation that create an opportunity for remote interactive educational services.
- 2e Continue teaching food safety via audioconferencing and lecture formats to food service managers, employees and consumers.

- 2f Continue testing consumer pressure canner gauges and develop a standardized form that allows analysis of data collected.
- 2g Reduce outbreaks of botulism in Alaska through a HACCP approach to fermenting methods used to produce traditional home fishery products.
- 2h Develop a food safety education program relating to issues unique to Alaska, including canning in cans, storing dried, 1/2 dried and fermented foods and outdoor freezing storage of foods.
- 2i Maintain partnership with Alaska DEC-EH in sponsoring the Alaska Food Safety Awareness Month.
- 2j Increase consumer education materials available to the 4-H youth audience of all ages, including information on preservation of Alaska fish, game and produce, and consumer education.

### **Output Indicators:**

- The public will have access to updated and new publications, CD-ROMs, and Web Sites addressing food safety and food preservation.
- Increase the amount of funding through grants to pursue revision and expansion of the Alaska food cost survey.
- Increase in the number of individuals, families and communities reached through non-formal education programs on food safety and preservation.
- Increased presence and participation in the Alaska Food Safety Awareness Month activities.
- Increased Leadership training and use of information about food preservation for 4-H youth activities.

### **Outcome Indicators:**

- More rural stakeholders will have information and materials made available on culturally relevant food supplies, food safety and preserving indigenous food sources.
- Reduction in cases of botulism and other food borne illness by teaching of ServSafe courses and HACCP methods to consumers.
- More National Restaurant Association certified managers and employees in restaurants.
- Increase in adult leaders and youth involved in 4-H projects on consumer education and food preservation

### **Internal and External Linkages:**

Internal linkages include collaborative work among Extension educators with the Alaska Cooperative Extension. External linkages will continue with federal and state agencies, private sector stakeholders including the National Restaurant Association (NRA), and the public. Linkages will include collaborative research and outreach, seeking advice on Extension direction, and extending research results to users.

### **Target Audiences:**

The targeted audiences continue to be consumers, especially parents who buy food for the home, agencies and organizations that rely on the Alaska food cost survey for the determination of allocations for allotments and benefits, and managers and employees of National Restaurant Association programs for commercial food establishments.

**Program Duration:**

The program addressing National Goal 2 consists of 10 projects. These are of moderate duration (five years). Because of rapid changes in Alaska's economy and the need for Extension educational programs to be both reactive and proactive to stakeholder needs, changes in projects over a five year period are likely to occur. These will be dealt with through possible amendments to the plan if the new projects significantly alter the approved plan of work.

**Allocated Resources:**

	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
<b>Federal</b>	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>
State Match	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>	<b>\$146,697</b>
FTE's	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>

**GOAL 3: A HEALTHY, WELL-NOURISHED POPULATION.** Optimize consumer health through improved quality of diets, food and number of food choices, and promotion of health, safety and access to quality health care.

**Program 3: To improve consumer health by providing research based information on healthful diets, food choices and healthy indoor environments and ways to access quality health care.**

**Statement of Issues:**

Nutrition plays a major role in growth and development, health promotion, and disease prevention. The 1988 Surgeon General's Report on Nutrition and Health found that for the two out of three Americans who neither smoke nor drink, eating patterns may shape their long-term health prospects more than any other personal choice. Poor nutrition is associated with five of the ten leading causes of non-accidental death, including coronary heart disease, some types of cancer, stroke, non insulin-dependent diabetes mellitus, and atherosclerosis. Mortality rates from heart disease and cancer, the two leading causes of death in Alaska, have risen over the past forty years. Over 60% of cancer deaths in the state are attributable to diet-related forms of the disease.

In Alaska, foods gathered or grown as part of a subsistence and personal use lifestyle are nutritious and constitute some proportion of a majority of Alaskans' diets. Increased dependence on gathered and grown foods is anticipated as Welfare Reform impacts communities in both rural and urban areas.

**Performance Goal:** To annually increase consumer awareness, understanding and information on dietary guidance and appropriate nutrition practices, and improving



individual and family health status through non-formal health and indoor environment education programs.

**Key Program Components:**

- Continued food and nutrition education programs that target youth and 4-H youth club programs.
- Continued integration of food preparation and nutrition information specific to foods gathered and grown in Alaska into food and nutrition education programs.
- Increasing the current list of Alaskan indigenous foods that have nutrient analysis data.
- Increasing the educational materials available via CD-ROM and/or World Wide Web in the subject matter areas of food and nutrition, indoor air quality, cold climate building techniques, and emergency preparedness.
- Increased information available about emergency preparedness, cold climate building, indoor air quality, and food and nutrition.

**Program Projects:**

- 3a Increase the current list of Alaskan indigenous foods that have nutrient analysis data.
- 3b Develop and continue food and nutrition education programs that target youth at elementary, middle, and high schools and 4-H youth club programs.
- 3c Increase the availability and amount of educational materials on the World Wide Web and CDROM about food and nutrition, health fair programs, indoor air quality, cold climate building techniques and emergency preparedness.
- 3d Apply for a Food Stamp nutrition grant which will be modeled after the EFNEP program and made available to limited-income clientele.
- 3e Teach "Cold Climate Building Techniques" in 8 Alaskan communities each year.
- 3f Develop and teach indoor air quality in at least 14 communities via audioconferencing.
- 3g Continue and expand active participation in community health fairs.
- 3h Maintain and support a strong visible program for rural and urban Alaskans about wise housing operation and energy efficient choices, including cost efficient "best practices" construction and operation alternatives.

**Output Indicators:**

- The public will have access to updated and new publications, CD-ROMs, and Web Sites addressing nutrition and healthy food choices, indoor air quality, cold climate building techniques, and emergency preparedness.
- Amount of dietary information on Alaska indigenous foods will be increased and made available to the public, and especially those relying on indigenous foods in their diets.
- Provide Extension outreach and service through workshops, conferences, small group and individual consultations promoting healthier lifestyles and dietary practices, as well as indoor environment education and cold climate building techniques.

**Outcome Indicators:**

- Increased number of persons completing non-formal education programs on dietary guidelines who plan to adopt recommended practices for healthier food choices.
- Increased number of persons completing non-formal education programs on indoor air quality who plan to adopt recommended practices and techniques for improved residential indoor environmental quality.

**Internal and External Linkages:**

Internal linkages include collaborative work among Extension educators with the Alaska Cooperative Extension. External linkages will continue with federal and state agencies, private sector stakeholders and the public. Linkages will include collaborative Extension outreach, seeking advice on educational objectives , and extending research-based information to users.

**Target Audiences:**

Audiences include the general public, low income individuals and families, and agencies and organizations who focus on nutrition education in Alaska.

**Program Duration:** The program addressing National Goal 3 consists of 8 projects. These are of moderate duration (5 years). Because of rapid changes in Alaska's economy and the need for Extension educational programs to be both reactive and proactive to stakeholder needs, changes in projects over a five year period are likely to occur. These will be dealt with through possible amendments to the plan if the new projects significantly alter the approved plan of work.

**Allocated Resources:**

	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
<b>Federal</b>	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>
State Match	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>	<b>\$66,694</b>
FTE's	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

**GOAL 4: GREATER HARMONY BETWEEN AGRICULTURE AND THE ENVIRONMENT.** Enhance the quality of the environment through better understanding of and building on agriculture’s and forestry’s complex links with soil, water, air, and biotic resources.

**Program 4: To increase the knowledge base and resource user behavior for environmental quality, agriculture, and forestry including conserving and protecting ecosystem integrity and biodiversity.**

**Statement of Issues:**

Alaska has a wide expanse of forest and range lands with less than 1 percent having undergone commodity production or land-use change. State leaders plan to develop both renewable and non-renewable natural resources to contribute to the economic well-being of its citizens without compromising ecological integrity and biodiversity. To be sustainable, any development activities require production practices that balance technologies and economic necessity with environmental imperatives. Research and outreach strategies must provide a knowledge base that will ensure better decision-making capabilities. Extension priorities for this program will be determined by joint collaboration with Extension faculty, our Statewide Advisory Council, private sector producers, landowners and consumers, and other members of the public in general. In 1998/99, we met with the following stakeholders to discuss Extension priorities for this program:

- Extension Statewide Advisory Council
- Alaska Forest Association
- Society of American Foresters
- Alaska Farm Bureau
- Boreal Forest Council

**Performance Goal:** Increase knowledge and options available to agricultural, forestry, and other land resource producers in a manner that supports sustainable development.

**Key Program Components:**

- Provide research-based information concerning bioremediation and revegetation of contaminated and disturbed lands to private landowners and non-government stakeholders.
- Provide agricultural and forest commodity producers with research-based information concerning soil carbon flux, soil nutrient deficiencies, and nutrient cycling.
- Provide private landowners and non-governmental stakeholders with research based information concerning special forest products, non-timber forest uses, commercial timber production, forest growth, health and site productivity.
- Assist the public and stakeholder groups in natural resource planning and policy education on natural resource management issues.
- Provide Extension educational programs directed to private landowners and non-governmental stakeholders that address agricultural and natural resources management and climate change.
- Develop and deliver water quality Extension education programs addressing forestry, agriculture and rural living practices.

**Program Projects:**

- 4a Provide agricultural and forest commodity producers with Extension information on soil management for production of food and fiber while preventing ecosystem degradation.

- 4b Annually increase the agricultural and forest producer adoption of production practices that conserve and/or protect surface and groundwater supplies on or adjacent to agricultural production sites or land uses.
- 4c Annually increase the research and knowledge base available from CSREES partners and cooperators on public policy issues affecting Alaska's sustainable agricultural and forest commodity production and the environment through workshops, publications and media contacts.
- 4d Provide Extension education programs on the use of Geographic Information Systems (GIS) directed to private landowners, civic groups and stakeholders on the potential impacts of land use decisions on the land base and related natural resources.
- 4e Provide research based information about Alaska soil properties and management techniques as related to sustainable agricultural and forest lands management for commodity production.
- 4f Assist stakeholders and private landowners with public processing of controversial land use and management plans through facilitation and conflict resolution.
- 4g Provide Extension education on the importance and techniques of identifying and managing exotic, invasive pest species on ecosystem integrity and the sustainable production of agricultural and forest commodities as well as non-consumptive natural resource uses.
- 4h Provide opportunities for youth involvement in environmental enhancement through 4-H and other youth activities such as Ag in the Classroom, Project Learning Tree and Extension programs that foster sustainable and economically viable agriculture and forest management.

#### **Output Indicators:**

- Continued revision on a three-year cycle of Extension publications addressing agricultural and forest commodity production practices that protect and enhance the environment.
- Increase the number of grants and contracts that will protect and enhance the environment by providing Extension educational programs regarding, protection of water resources, techniques of identifying and managing exotic and invasive pest species, the use of Geographic Information Systems (GIS) to assist landowners and managers in assessing the impacts of land use decisions on the land base and the environment, and information on Alaska soil properties and management techniques.
- Record Extension educational services to Alaska agricultural and forest commodity producers provided through workshops, conferences, small group and individual consultations, new extension publications and electronic communication.
- Increase the number of instances and the number of participants involved in local Extension activities that assist with the public processing of controversial land use and management plans potentially impacting the environment.

- Increase the involvement of youth in 4-H, Ag in the Classroom, Project Learning Tree and related environmental education programs that demonstrate sustainable and environmentally sound agriculture and forest management practices.
- Annually provide impact statements/success stories resulting from Extension educational programming directed toward this goal.
- Annually provide statements, testimony and/or evaluations from recipients of Extension educational activities

**Outcome Indicators:**

- Document stakeholder impacts resulting from adoption of practices, techniques and information provided by Extension educational programs to protect or enhance the environment while providing for sustainable, economically viable agriculture and forest lands management.
- Develop baseline environmental quality indicators, particularly regarding water quality and pest management, that will enable future evaluation of Extension educational programs for agriculture and forest production on the environment.
- Greater harmony between agriculture and forest producers and protection of the physical environment as a result of Extension educational programs
- More rational land use where Extension land resource programs are provided by demonstrating with Geographic Information Systems (GIS) the potential environmental impacts of proposed land uses.
- A more rational decision-making and greater harmony in targeted resource dependent communities as a result of Extension activities to facilitate conflict management and collaborative learning.
- Increased knowledge among targeted youth that agriculture and forest management can be sustainable and environmentally sound.

**Internal and External Linkages:**

Internal linkages include collaborative work among Extension educators with Alaska Cooperative Extension and from different departments within the School of Agriculture and Land Resources Management, the Agricultural and Forestry Experiment Station, the College of Natural Resources Development and Management, and the Institute of Arctic Biology and other units of the University of Alaska. External linkages involve a formal interface through other Western Region Extension systems, our statewide advisory council, public and private cooperators including Alaska Forestry Association; Alaska Farm Bureau; other private producers and non-government organizations; Alaska Departments of Natural Resources, Environmental Conservation, and Fish and Game; U.S. Forest Service; National Park Service; Bureau of Land Management, Natural Resource Conservation Service; Environmental Protection Agency and relevant conservation groups. We have additional external links through various regional and national collaborations such as the EPA/CES Water Quality Liaison.

**Target Audiences:**

The target audiences include producers, processors and consumers of agricultural and forestry products, users of land and water resources, individuals and groups concerned about the quality of the Alaska environment, private landowners and public resource agencies. Our efforts will be directed toward environmentally and economically sustainable development and conservation of our natural resources that will benefit all Alaskans, born and unborn.

**Program Duration:**

The program addressing National Goal 4 consists of 8 projects. These are of moderate duration (5 years). Because of rapid changes in Alaska's economy and the need for Extension educational programs to be both reactive and proactive to stakeholder needs, changes in projects over a five year period are likely to occur. These will be dealt with through possible amendments to the plan if the new projects significantly alter the approved plan of work.

**Allocated Resources:**

	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
<b>Federal</b>	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>
State Match	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>	<b>\$100,019</b>
FTE's	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

**GOAL 5: ENHANCE ECONOMIC AND SOCIAL OPPORTUNITIES AND QUALITY OF LIFE FOR AMERICANS.** Empower people and communities, through research-based information and education, to address economic and social challenges facing our youth, families, and communities. Program 5: Enhance economic and social opportunities and quality of life for Alaska youth, families, and communities in diverse geographic locations. Statement of Issues: Alaska is a geographically diverse and sprawling state with an urban core and rural periphery. Many of the rural communities are off the limited road/rail system and are accessible only by air or water. These rural communities are dependent on resource use for subsistence and, to a lesser degree, on resource development for economic opportunities. Extension programs will address economic diversification of rural and resource dependent communities, including the need for new and value added businesses utilizing local food and non-food resources. Other programs will address youth / 4-H and leadership development in targeted communities. Welfare Reform is placing increased demands on rural and limited income families, which will be served by family living assistance through parenting education and personal financial management. The Master Gardener Volunteer program provides over 24 Alaska communities with volunteers who engage in school gardening projects, home food production and community development through landscaping. The Statewide Advisory Council and District Advisory Councils along with stakeholder input will assist in identifying the need for and assist in setting priorities of quality Extension educational programs. Performance Goal: Enhance the quality of life opportunities and address community needs in targeted Alaska communities, and address the needs of Alaska youth and families. Key Program Components:

- Local natural resource development and value-added processing for enhanced community economic diversity.

- Environmental and public policy impacts on economic and social needs of families and natural resource dependent communities.
- Training local volunteers as Master Gardeners.
- Provide traditionally under-served clientele, including families, with information on personal finance management and parenting education.
- Provide rural and natural resource dependent communities with community development and conflict resolution assistance.
- Train adult leaders and coordinate youth learning for a comprehensive statewide 4-H Program.

**Program Projects:**

- 5a Assist stakeholders as individuals and families in the production of new and indigenous cultivated and gathered plant and animal food products, including home gardening educational activities.
- 5b Identify and assist in the resolution of regulatory issues and concerns that represent barriers to the production of new and value-added grown and gathered Alaska food products.
- 5c Provide research-based information and facilitate the development of renewable energies, particularly wind, solar and hydroelectric resources for Alaska, with emphasis on rural communities.
- 5d Provide programs addressing individual and family financial resource management, including high school financial planning, women's financial information, money after 50, and investments.
- 5e Identify parenting education materials that can be used within Alaska, determine a method(s) of delivery, and develop a strategy for delivering these materials in each ACE district.
- 5f Conduct youth education programs within schools to help youth develop lifelong skills improving quality of life.
- 5g Provide life skills education through the 4-H program that brings families together in decision-making situations that affect quality of life.
- 5h Develop a comprehensive 4-H club program that provides adult role models to youth while teaching lifelong skills.
- 5i Assist target communities and non governmental organizations in determining strategies to manage conflict, improve the quality of life locally and enhance economic opportunities by facilitating and training public process skills.

**Output Indicators:**

- Increase the number of Extension educational materials available in subject matter areas of parenting, financial information, renewable energies, food product development and domestically cultivated and gathered food products.
- Increased outreach to high schoolers, women's groups, low-income families with non-formal education programs in financial resource management.
- Increased 4-H leadership training and club programming addressing skills to enhance communication and decision-making in families.
- Quantification of the number of individuals and communities involved in extension programs on community and leadership development.
- Numbers of Master Gardeners trained.
- Numbers of 4-H leaders trained.

**Outcome Indicators:**

- Reporting annually of the achievements and awards of 4-H members.
- Annually describing and quantifying the services provided by Master Gardener volunteers.
- Annually quantifying the numbers of rural and natural resource dependent communities, families and individuals served by family, community and economic development programs.
- Numbers of traditionally under-served clientele, including families, receiving non-formal educational programs on parenting and personal finance management.
- Documentation of the impacts of extension public policy education and community development on individuals, groups and communities.

**Internal and External Linkages:**

Internal linkages include collaborative work among Extension educators with Alaska Cooperative Extension. External linkages will include the Agricultural and Forestry Experiment Station, the School of Agriculture and Land Resource Management, other units within the UA system including such entities as the College of Rural Alaska, other Western Region and National Extension systems and organizations, federal and state agencies, private sector stakeholders, local government, non-government organizations, and Native Alaskan villages, regional corporations and tribal organizations.

**Target Audiences:**

In addition to traditional audiences listed under previous Goals, this program will focus on businesses and entrepreneurs as well as communities, youth, families, local volunteers and newly forming cooperatives, and non-profit and for-profit development corporations. Efforts will be made to address problems of the traditionally under-served rural populations within the limit of resources available.

**Program Duration:**

The program addressing National Goal 5 consists of 9 projects within the Alaska Cooperative Extension and will be of moderate (5 years) duration. Because of rapid changes in Alaska's economy and the need for Extension educational programs to be both reactive and proactive to stakeholder needs, changes in projects over a five year period are likely to occur. These will be dealt with through possible amendments to the plan if the new projects significantly alter the approved plan of work.

**Allocated Resources:**

	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
<b>Federal</b>	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>
State Match	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>	<b>\$296,962</b>
FTE's	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>

**Stakeholder Input:**



The Alaska Cooperative Extension Statewide Advisory Council: The Director, Program Chairs, and selected faculty will meet with the Statewide Advisory Council for assistance in establishing priorities and developing program direction for ACE in consultation with appropriate constituencies. Regular meetings include one face-to-face, and two audio conferences (with additional meetings as deemed necessary). The membership of the Council (which consists of 11 regular members and two ex officio members) is appointed by the Director of Extension on recommendations provided by the Advisory Council and represents a broad range of local communities, industry, governmental, private and citizen interests. Bylaws for the Statewide Advisory Council and minutes of all meetings are available upon request.

In 1999, the Director of Extension and the Statewide Advisory Council in coordination with Extension faculty and staff developed a strategic plan to serve stakeholder needs. Updated versions of the Plan will be utilized in future years as needed to maintain broad input for Extension programs.

Regional Listening Sessions: Extension has traditionally met with regional audiences around the state in both formal and informal settings each year. Examples of these include:

- Regional and Statewide Farm Bureau Meetings
- Mat-Su Potato and Vegetable Growers Meeting
- Delta Farm Forum
- Greenhouse Growers Annual Meeting
- Alaska Agricultural Symposium
- Reindeer Herders Association Annual Meeting
- Alaska Forestry Association Annual Meeting
- Alaska Livestock Producers Annual Meeting
- 4-H State Leader Meetings
- District Advisory Councils
- On-demand meetings at the request of stakeholders

These traditional listening sessions will continue to be focal points for listening to stakeholders. As required by the AREERA of 1998, and in cooperation with the Agricultural and Forestry Experiment Station, these will be advertised as broadly as possible and identified as points of contact for public input into research and extension program development.

#### Merit and Peer Review:

Alaska Cooperative Extension has a merit review procedure for all Smith-Lever funds effective October 1, 1999. ACE's process is a combination of internal (within Alaska) and external (outside Alaska) involvement.

Internal review involves participation of our stakeholder groups previously listed, as well as regional listening sessions and focus groups by which the general public and elected officials at the federal, state, local and tribal government levels are invited to review and respond to the ACE Plan of Work and subsequent annual reports. Additionally, ACE's

statewide advisory mechanism is being realigned to each of the program goals in order to enhance the focus of stakeholder input.

External review is under development and ACE is currently seeking out working arrangements to involve another western state(s) in a review process of respective programs. Discussions are currently underway with Hawaii Cooperative Extension.

Multi-institutional, multi-disciplinary, multi-state, integrated activities:

Alaska Cooperative Extension has been involved in a variety of multi-state, multi-regional and national partnerships. These partnerships involve formal memorandums of agreement with, for example, WREP 125, EPA/CES WQ Liaison, Western Regional committees (Community Development, Public Policy and Marketing) as well as informal partnerships like Western Forage Workers Group, and regional 4-H partnerships. Extension also has partnerships through agents and specialists serving on regional and national organizations such as the National Public Policy Education Committee, National Association of County Agriculture Agents and others. ACE also has informal partnerships with Oregon State University and is developing linkages with other Western Region Extension systems. As these partnerships are finalized, they will be formalized and included in POW updates. While the goal of ACE is to realize up to 25% dedication of funding allocation to these activities, the reality is that due to Alaska's remoteness as well as ACE's funding limitations, current efforts fall considerably below the 25% goal. A system needs to be established to identify regional and multi-state program priorities and to allocate resources to support these priorities.

#### **Integration of Extension and Research Programming:**

Much of the integration of Extension and Research is occurring in joint positions between ACE and AFES which include: Livestock and Agronomy Specialists (M. Shipka and R. Gavlak), and the Walworth position. Additionally, there is integration through joint programming with the forestry workshops and the annual educational programs (Vegetable and Potato Growers Conference, Agricultural Symposium, etc.).

#### **GOAL 1:**

In anticipation of AREERA requirements, the Agricultural and Forestry Experiment Station and Alaska Cooperative Extension initiated split appointments in FY99 between researchers in the Plant, Animal, and Soil Science Department (SALRM/AFES) and Extension Specialists in the Land Resources Department (ACE). In FY2000 split positions and collaborative activities will exist in horticulture, agronomy, and animal science. We anticipate that all split positions will be actively involved in multistate efforts through research technical or coordinating committees. Specific areas of integrated programming will include:

#### **Agronomic Crops and Soils**

Animal feeds including forages, pasture, and grains occupy the majority of land in agricultural production primarily in Delta Junction, the Matanuska-Susitna Valleys, and the Kenai Peninsula. Research and extension activities will continue to center on variety evaluation, alternative crops, nutrient requirements and management, and general soil management.

### Potato and Vegetable Crops

Potato and vegetable production accounts for less than 10 percent of the total acres in crop production, but 32 percent of cash receipts. Research and demonstration over the period of this plan will center on variety selection, disease control and management, nutrient requirements, irrigation, and weed control. Greenhouse Management/Nursery Greenhouse production accounts for approximately 50 percent of the total agricultural cash receipts for Alaska. The primary marketed products are cut flowers, bedding plants, ornamentals and other landscaping plants. Research and Extension will continue to address physiological response to light, day length, and temperature in controlled environments and research and demonstration efforts at the Georgeson Botanical Garden identifies winter hardy perennial and annual ornamentals suitable for the landscaping and nursery industry. The latter has a high degree of volunteer and extension involvement and both projects participate in extension workshops, master gardener program, and the annual greenhouse and nursery symposium.

### Reindeer Production

Alaska native reindeer herders manage approximately 35,000 deer on Alaska's Seward Peninsula. AFES has worked cooperatively with Alaska Cooperative Extension Reindeer Agent providing research information related to range management, reproduction, disease management and reindeer nutrition. The current Hatch project will determine palatability and digestibility of locally grown feeds for low-cost diets for captive reindeer.

Integrated activities between the Agriculture & Forestry Experiment Station and the Alaska Cooperative Extension will constitute a minimum of a) twice the FY1997 integrated activities or b) a baseline 25 percent, whichever is less.

### **GOAL 4:**

There will be two program areas under Goal 4 which will involve collaboration with Alaska Cooperative Extension:

#### Soil Quality/Nutrient Management

The impact of tillage/crop rotation on soil conservation and quality is an ongoing program involving Experiment Station soil scientists and Extension specialists and agents.

#### Forest Production/Protection

The Alaska Cooperative Extension Forestry Specialist works cooperatively with AFES researchers both in applied research, demonstration, and dissemination on issues including growth and yield, wildlife habitat, forest protection, and logging impacts. **Under-served and under-represented populations:**

For purposes of ACE's Plan of Work, **under-served** populations will include individuals, groups and/or organizations whose needs have not been addressed in past ACE educational programming. A special focus is on rural Alaska due to the remoteness and lack of alternative resources for that potential clientele group. **Under-represented** populations include those individuals, groups and/or organizations who may not have participated fully in past educational programming, and are not limited to women, racial and ethnic minorities, and persons with disabilities and limited-resource clients. These

groups will be involved in the participation of our stakeholder groups previously listed as well as by invitation to the general public and elected officials at the federal, state, local and tribal government levels to review and respond to the ACE Plan of Work and subsequent annual reports.