

Annual Report of Accomplishments and Results
University of Alaska Fairbanks
Cooperative Extension Service
FY2001: October 2000 through September 2001

I. Planned Programs

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.

Executive Summary:

Highlights and Accomplishments

During this reporting period more than 80 planned workshops related to Goal 1 were taught by twelve Land Resources faculty, reaching 2,548 Alaskans in 14 communities. Topics ranged from Master Gardening, lawn care, insects and pesticide management, landscaping, garden production, and managing woodlots. Selected class evaluations indicated that more than 80% of the clientele planned to adopt new practices in the areas of pesticide use.

Land Resources program faculty provided 62 hours of public service presentations, reaching 1,200 clientele, covering a range of topics from lawn care, vegetable gardening, forest products, to greenhouse management. Faculty also provided over 1,892 hours of consultation time to individuals, agencies and organizations during this reporting period, reaching more than 4,000 clientele on Goal 1 related topics that included noxious weed control, horticulture, pesticide use, vegetable growing, and tree clinics. Contacts were made by phone calls, e-mails, office and site visits, meetings and audio conferencing.

In this reporting period 3,353 clientele received ag/hort newsletters, 30 newspaper articles were published, and 18 fact sheets and publications were written by faculty. Fifteen television programs featuring Extension ag/hort topics delivered 3 hours worth of information and 145 radio minutes were broadcast throughout the state.

Alaska is working to implement AREERA. It is requiring changes to the usual method of reporting and documenting impacts. The loss of faculty and staff over the past four years has placed a heavy workload on the remaining agents, specialists and staff. The implementation of AREERA is evolving. As each year passes extension specialists and agents will increasingly work to fully implement the CES 5 year Plan of Work.

Expenditures and FTEs

| | FY2001 |
|-------------|-----------|
| Federal | \$321,750 |
| State Match | \$321,750 |
| FTE's | 9 |

Key Themes:

Agricultural Competitiveness

Statement: The Palmer District extension horticulturist, filling a joint position with the School of Agriculture and Land Resources Management -- Palmer Research and Extension Center, tested 15 cultivars of lettuce for quality and yield in the summer of 2001. Applied research and demonstration to enhance vegetable production included continuation of on-farm lettuce variety trials for head size, tip burn, and marketability. New varieties of iceberg head lettuce were added and compared in grower fields with currently grown varieties. Other variety evaluations were conducted at the Palmer Research and Extension Center (PREC) for cabbage, radicchio, and leafy greens. New Crop Opportunities studies investigated specialty greens for a presently untapped, in-state retail and restaurant market. The 2001 Alaska State Fair was a useful forum for obtaining public feedback through taste sampling of the new cultivars.

Impact: Increases in carrot and cabbage production (71% and 33%, respectively) largely resulting from increased value-added marketing, offers optimism for similar marketability for specialty greens. A popular crop, head lettuce is "miles fresher" when grown in Alaska, and growers choose cultivars that are suited to the long days and cool soils in Alaska. Baby greens can be harvested in three weeks, and produce a second crop in days, a real plus in Alaska's short growing season. Research results will be shared with growers and the public via extension agents and specialists, and will positively impact both commercial growers and home gardeners.

Source of Federal Funds - Smith-Lever 3b&c, Hatch General, CSREES Special Grants

Scope of Impact - Integrated Research and Extension

Agricultural Profitability

Statement: The 20th Annual Alaska Greenhouse and Nursery Conference presented topics ranging from safe pesticide use to controlled environment horticulture on Mars. One-hundred-four commercial growers and landscapers attended, representing over a dozen communities, with forty percent of the participants traveling over 50 miles to attend, and 66 percent having direct involvement with greenhouses, garden centers, nurseries, plantscape companies, landscape contracting firms, golf courses or grounds maintenance. Horticulture is the largest segment of Alaskan agriculture.

Impact: More than 80% of participants reported they've made changes in their horticultural practices as a result of attending past conferences. They also responded that they plan to try new pesticides, order plants from wholesalers, and will not plant invasive plants. Ninety-seven percent indicated they plan to attend the next year's conference.

Source of Federal Funds: Smith Lever 3b&c

Scope of Impact: Integrated Extension and Research

Agricultural Profitability

Statement: The 2001 Delta Farm Forum was attended by more than 140 people, another exceptional turnout for the annual forum held at Delta Junction. Coordinated by the Delta Junction Land Resources Agent, both AFES researchers and CES specialists and agents disseminated knowledge from applied research, as well as information related to commercial greenhouse production, estate planning, game ranching, grain trials, haylage production, diversified farming, and miscellaneous reports from state and federal agencies. Farmers and producers were able to meet with and speak to their state legislative representative and state department officials on agriculture topics of interest and concern in Alaska.

Impact: Quantifiable methods of assessing specific areas of effectiveness are being determined.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: Integrated Research and Extension

Agricultural Profitability

Statement: The extension land resources program organized the annual Potato and Vegetable Growers Conference. This annual event is structured to address current concerns of commercial produce growers in south central Alaska. It also exposes growers to new technology and growing practices that show promise in Alaska. Potato and vegetable growers have identified plant disease as the single most important deterrent to increasing profits in recent years. Identification of disease resistant varieties, pest monitoring, integrated pest management, and biological control methods are the primary avenues of investigation being pursued by Alaska horticulture and plant pathology researchers. Alaska Agricultural Experiment Station horticulturists and extension horticulturist continued field and laboratory research on evaluation of commercial production practices, cultivars, and diseases of potato and vegetables. A combination Experiment Station/Cooperative Extension late blight treatment and monitoring project initiated in 1998 following an outbreak of the disease has successfully maintained a blight-free potato crop in 1999 and 2000. In view of the 31% reduction in value of potato production in 2000, savings generated by less fungicide application resulted in a significantly higher "bottom line" for some producers. Results from applied studies are presented each year to the joint SAES/CES sponsored Potato and Vegetable Growers Conference. 85 producers attended. Attendance was down slightly in 2000 but still represented well over 50% of commercial producers in attendance.

Impact: These presentations over the past 10 years have established recommended varieties of potatoes and head lettuce grown by Alaska producers as well as providing production practices information. After a steady five-year increase in value of production of potatoes, 2000 production fell off but rebounded in 2001 to one of the highest statewide yields ever. The value of production 2001 was \$4,853,000 compared to \$2,760,000 in 2000. Potato growers treated in excess of 40% of the total acres with multiple fungicide applications in response to an outbreak of late blight in 1998. On the positive side, quick action by SAES plant pathologists and extension pest scouts resulted in treatment being reduced to 25% of the acreage in 1999 and no treatment required in 2000 or 2001 and no late blight was detected in either year.

Source of Federal Funds: Smith-Lever 3b&c, Hatch, and CSREES Special Grants

Scope of Impact: Integrated Research and Extension

Animal Reproduction

Statement: On-farm site visits to Alaska livestock operations by extension's livestock specialist provided excellent opportunities to work with individual producers on livestock production and management issues that impact farm profitability, and allow development of animal nutrition and feed management programs, animal breeding and reproductive management programs, improvement of animal health and calf survivability and improvement of many other factors related to the well being of Alaska's livestock industry. More than 70 on-farm site visits were made by the livestock specialist to address a wide range of needs from feed analysis, diagnosing disease and health conditions, to herd management.

Impact: Outcomes from this research demonstrate the effectiveness of reproductive management technologies and techniques that will be used to improve reproductive efficiency on traditional dairy/beef and alternative livestock farms, ranches, and open range. At present, reindeer and muskox herds represent primarily Alaska Native enterprises and offer economic opportunities in extremely rural settings. For reindeer and muskox herders, bull management effects timing of breeding and thus improves reproductive success. Research efforts for the project will increasingly involve additional species including elk and bison. Both dairy production and beef and reindeer numbers are down significantly and applied research and outreach activities closely tied to farm operations is critical.

Source of Federal Funds: Smith-Lever 3b&c, Hatch

Scope of Impact: Integrated Research and Extension

Diversified/Alternative Agriculture

Statement: Alaska Cooperative Extension was the major sponsor the 2001 Alternative Livestock Producers Conference attended by 96 registrants including 90 percent of all Alaska game farmers. 16 different speakers made presentations covering animal husbandry, operations management, and marketing and profitability. A field trip was hosted that visited three ranch operations for yak, bison, and elk production. Delta Junction's Future Farmers of America served a lunch with main dishes of bison stew and reindeer sausage to participants. The conference was organized by the extension livestock specialist who holds a joint extension and research appointment, and the Delta Junction Land Resources Agent and staff. The new Alaska Diversified Livestock Association (established from this conference) has approached the Experiment Station with a request for research that specifically addresses their needs and has approached the state legislature for funding support.

Impact: The successful production of alternative livestock in Alaska depends on the success of individual producers coming together for improvement of the industry as a whole. One important outcome of this conference was the establishment of the Alaska Diversified Livestock Association. A follow-up survey of the attendees reported that the conference presentations and topics were very applicable to the needs of the producers. The request for further research by the

new Association highlights the synergistic importance and significance of extension and research collaboration.

Source of Federal Funds: Smith-Lever 3b&c, USDA Rural Development Grant

Scope of Impact: Integrated Research and Extension

Grazing (Forage)

Statement: For six years, "Apelsvoll" has offered superior quality, good winter hardiness and high yield potential. It is an ideal cultivar for Alaska's horse-hay market and the first two-cuttings-per-season perennial forage cultivar adapted to northern Kenai Peninsula soils and environments. Local interest in this new cultivar is growing despite minimal promotion. Two multi-acre on-farm demonstrations were established on the peninsula in 2001 in cooperation with Dr. Arild Larsen of the Norwegian Crop Research Institute, Vgones Research Station, Norway. Both a hay and pasture field were planted and will be evaluated over the next three years. The acceptance of this new cultivar by a variety of livestock fed "Apelsvoll," has been extremely encouraging.

Impact: 1992-99 "All hay" yields on the Kenai Peninsula averaged 1.1 Tons/acre, with an average price per 50-lb bale (1999) of \$5.88 (Mueller, D.M. and M. Burgess, 2000 *Alaska Agricultural Statistics*, p. 17). In the "Apelsvoll" trials over 3 Tons/acre were produced. Small and large trial results indicate that properly managed "Apelsvoll" orchardgrass should at least double yields and subsequent returns to hay producers.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State specific.

Home Lawn and Gardening

Statement: Garden clinics in the Anchorage District utilized the time and talents of Master Gardener volunteers to educate the public at large and at the Alaska State Fair. Master Gardeners also supported the Alaska Botanical Garden to provide visitors with extension publications as well as direct educational contact. In Fairbanks, Master Gardeners were busy with the 10th Annual Master Gardener Tour, the Tanana Valley state fair, and volunteering at the Georgeson Botanical Garden on the UAF campus. In Delta Junction, Master Gardeners helped with preparing the vegetable and flower gardens and grain plots for the Sullivan Roadhouse Historical Museum which draws about 4,600 visitors a season. With each new MG student volunteering 40 hours of service to share what they have learned with the rest of the community, the benefits keep growing.

Impact: More than 100 Master Gardeners were trained this past year, whose 4000 hours of volunteer service are valued conservatively at \$48,000. Volunteers participated in garden clinics and fairs, reaching thousands people in Alaskan communities.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific

Invasive Species

Statement: The Delta land resources program continues to take an aggressive, proactive stance dealing with several specific noxious weed species occurring in the area. Site visits of area farms are made to educate land owners/operators of proper weed identification, various control options, and best management practices to minimize the introduction or spread of these weeds.

Impact: The Land Resources Agent at Delta Junction is serving on the board of the Noxious Weed Control Committee. This public service has allowed him to assist with hiring and training of two personnel to scout and help control the invasion of noxious weeds.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific

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.

Executive Summary:

Highlights and Accomplishments

During this reporting period more than 60 planned workshops related to Goal 2 were taught by eight Home Economics faculty, reaching 936 Alaskans in 15 communities. Topics included canning and food preservation, and utilizing traditional food sources (berries, wild salmon and game meat). Selected class evaluations indicated that more than 90% of the clientele planned to adopt new practices in the areas of safe food utilization and preservation.

Home Economics program faculty provided over 674 hours of consultation time to individuals, agencies and organizations during this reporting period, reaching more than 4,785 clientele on Goal 2 topics which included safe canning and food preservation, and utilizing traditional Alaskan food sources. Contacts were made by public presentations, phone calls, e-mails, office and site visits, fairs, meetings and audio conferencing.

In this reporting period 1,400 clientele received newsletters by Home Economics faculty, 28 newspaper articles were published on food safety topics, and 8 fact sheets and publications were written by faculty. Thirty minutes of television programming and 17 minutes worth of radio spots were used statewide to deliver food safety information.

Pressure canner gauges continue to be tested throughout the state. A total of 287 gauges were tested by Home Economists with a gauge failure rate of 12%.

Expenditures and FTEs

| | FY2001 |
|-------------|-----------|
| Federal | \$143,000 |
| State Match | \$143,000 |
| FTE's | 4 |

Key Themes:

Food Accessibility and Affordability

Statement: The Fairbanks community serves 26,000 people a year through the local Food Bank. The local extension home economist supports this work by offering classes on making baby food and food preparation. Each month people are taught how to use the food they receive in their USDA Commodities TEFAP (The Emergency Food Assistance Program) food boxes. Last year the Food Bank had 929 families enrolled in the TEFAP program and extension influenced at least 500 of those families through talking about and demonstrating practical food use. It is a requirement that each enrolled recipient sit through an extension food class each year.

Impact: Training of 500+ families enhances the usability of thousands of dollars worth of food a year. For example, 500 families receiving enough food for one week a month worth \$100, is more than \$50,000 worth of food that has been efficiently and nutritionally utilized. This training also enhances the benefits of the TEFAP food program.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State specific

Food Quality

Statement: The home economics food technology specialist researched processing times for quart jars of salmon in cooperation with the UAF School of Fisheries and Marine Science's Marine Advisory Program located in Kodiak. Research during this time period has focused on times and temperatures for canning fish in quart jars and two sizes of cans. This was a need identified by the home economics faculty. The research was carried out with the assistance of the UAF Fisheries Industrial Technology Center (FITC) in Kodiak. The FITC administration, faculty and staff have been extremely supportive by providing access to their facility as well as invaluable assistance from their faculty. The research resulted in times for home processing fish in quarts and fish in one-pound and half-pound cans. This research was used as the basis for the initial training session at FITC and in publications describing how to pressure process fish in these containers. The publications have been reviewed and edited by the home economics faculty, and the final drafts will be distributed by November of 2001. The new publications will be available early in 2002.

Impact: The research results will allow dissemination of up-to-date information via extension and other agency publications and educational programs, enhancing food safety and quality of an Alaskan diet staple.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific, Integrated Extension and Research

Food Safety

Statement: Food Safety and Preservation continues to be a central component of the home economics program in Alaska. Food preservation information is delivered through classes, workshops, community wide events, fair booths, newspapers, newsletters and the toll free Food Safety and Preservation Hotline. According to Alaska Department of Fish and Game, 40% of the fishing effort in the state of Alaska takes place on the Kenai Peninsula. Annually, approximately 300,000 sockeye are harvested in the sport fishery on the Kenai Peninsula, mostly during a salmon run in July. One Soldotna hardware store reports selling 24,000 to 32,000 salmon cans each year to home canners. Salmon is an important food in the diet of many Alaskans. Teaching people to preserve food in a safe and appropriate manner, whether it is fish, big game or berries, is an essential part of extension's outreach.

Impact: Over 80 hours of instruction throughout the state reaching more than 500 clientele addressed canning, jarring, smoking and cooking salmon and wild game, as well as utilizing berries and home garden produce. Over 5000 consumer questions were answered by the extension home economists and the food preservation technician throughout the state, both in person and by telephone hotline.

Source of Federal Funds: Smith-Lever Food Safety and Quality Formula Funds

Scope of Impact: State Specific

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.

Executive Summary:

Highlights and Accomplishments

During this reporting period 55 classes were taught by extension home economics faculty that related to Goal 3 and quality of diets, quality of food or food choices. These classes represented 84 hours of teaching and reached 1603 clientele. Faculty participated in community health fairs that reached 175 clientele in the village of Bethel, and thousands of the general public in Fairbanks and Anchorage. One faculty member is an active committee member on the statewide health fair board and heads a local committee that identifies all the non-medical volunteers for the health fair. More than 1000 hours of volunteer time is donated working with the board and arranging presenters for the fairs.

Consultations by the home economists with individuals, agencies and organizations reached 3,610 clientele with an investment of 560 hours. The nutrition specialist/EFNEP coordinator

documented 788 hours of consultations as he assisted extension faculty, media, agencies and peers in other states with questions in this program area.

Six EFNEP food and nutrition assistants in Anchorage and Fairbanks taught nutrition, cooking skills and budgeting to 294 low-income families. They also taught the food guide pyramid, food safety, healthy snacks and food choices to 2,055 youth. These activities represented 5,938 contact hours during this reporting period.

In this reporting period 12 newspaper articles were published on diet and nutrition topics, and 12 fact sheets and publications were written by faculty. Twenty-six minutes of television programming were used statewide to deliver nutrition information. Four web pages were developed by the extension food science specialist to disseminate information of interest to Alaskans related to goal 3 topics.

Expenditures and FTEs

| | FY2001 |
|-------------|----------|
| Federal | \$71,500 |
| State Match | \$71,500 |
| FTE's | 2 |

Key Themes:

Human Health

Statement: The Tanana District Extension office cooperates each year with the Alaska Health Fair Association to bring the latest in health research to Alaska's communities. Extension topics presented at the fairs include food safety and preservation, proper hand washing techniques, pressure canner gauge testing, and preventative health care, as well as information in the form of publications and EFNEP correspondence course information. Health fairs are an economical way to reach many people and present targeted information in a casual manner, reaching both youth and adults. An exhibit on sugar for use at Health Fairs has been developed. It is an interactive display with youth measuring out the amounts of sugar in various sized drinks. The aim is to help reduce the amount of sugar consumed by drinking heavily sweetened beverages such as soda pop.

Impact: Quantifiable methods of assessing specific areas of effectiveness are being determined.

Source of Federal Funds: Smith-Lever 3b&c, EFNEP 3d funds.

Scope of Impact: State Specific

Human Nutrition

Statement: The Tanana District home economist and EFNEP program continue to offer the Making Baby Food class at the Food Bank. Thirty hours of classes were presented to more than 175 parents. Interest continues to be strong, and the classes have been extended for 6 more

months since a grant for another 80 grinders has come through. Each family attending a class is given a baby food grinder and a box of food from the Food Bank. The class is also taught at Eielson through Family Support and WIC on a quarterly basis.

Impact: Last year fifty parents were trained in making baby food. This year the number has more than tripled to more than 175 parents. A grant for another 80 baby food grinders has been obtained. The class has been an excellent way to recruit new clientele for EFNEP. Twenty percent of our new enrollees in EFNEP come from participants in the Making Baby Food Class.

Source of Federal Funds: Smith-Lever 3b&c, EFNEP 3d funds.

Scope of Impact: State Specific

Human Health

Statement: Topics related to nutrition and health of the aging population is a growing concern within the state. Home economists addressed good nutrition and healthy lifestyles for senior citizens by offering classes on the food pyramid, diabetes and nutrition, and osteoporosis. A Senior Health Fair was given this year, reaching 108 seniors. The home economist in Soldotna has also reached a growing audience in strength and balance training for older women.

Impact: Quantifiable methods of assessing specific areas of effectiveness are being determined.

Source of Federal Funds: Smith-Lever 3b&c, EFNEP 3d funds.

Scope of Impact: State Specific

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

Executive Summary:

Highlights and Accomplishments

During this reporting period 12 planned workshops were taught by the state forestry specialist, reaching 476 Alaskans in six communities. Topics included forest stewardship, insects and diseases of forests, forest product development and forest genetics.

The specialist and land resources faculty provided 126 hours of consultation time to individuals, agencies and organizations during this reporting period, reaching more than 480 clientele on Goal 4 topics which included urban forestry, invasive weeds, pesticide and herbicide issues, and soil and nutrient management. Contacts were made by public presentations, phone calls, e-mails, office and site visits, fairs, meetings with agencies, and audio conferencing.

In the area of water quality, two Land Resources agents taught 29 hours of workshops reaching 574 people, covering topics from village drinking water, issues affecting homeowners, to

watersheds. Agents provided 925 hours of consultation time to individuals, agencies and organizations, reaching more than 5,680 clientele on topics including drinking water and water quality environmental issues.

In the area of invasive pest management, 67 educational workshops, presentation and classes were presented to the public in six communities by land resources faculty and IPM technicians. More than 10,000 publications were distributed in IPM related activities alone, and 42 media contacts delivered (combination of television, newspaper articles and newsletters, radio spots).

In this reporting period 5,350 newsletters were distributed to clientele on topics from forestry to water quality. Also in this period, 3 fact sheets and 3 publications were written by faculty.

Combined, the Goal 4 programs work to keep Alaska's environment an international model of a pristine environment in an economically viable, contemporary society that values working lands. In a state where distances are great, conditions diverse, and demands on a relatively small staff are growing, information delivery and exchange of information continue to be critical elements, as are working partnerships with state researchers and other entities. Communities and their stakeholders need to be involved in the planning processes for CES and addressing land use issues. Restructuring of the CES state advisory council has made strides to increase geographic and stakeholder representation. CES is continuing to address the issues of environmental quality with its in-state partners, in spite of economic constraints and uncertainties and its own workload challenges.

Expenditures and FTEs

| | |
|-------------|-----------|
| | FY2001 |
| Federal | \$107,250 |
| State Match | \$107,250 |
| FTE's | 3 |

Key Themes:

Integrated Pest Management

Statement: The Integrated Pest Management program provides education and consultations to the Alaskan public on alternative, least toxic pest control in the home and garden. Through direct contacts such as phone calls, office walk-ins with specimens, presentations to school and community groups, clients throughout Alaska have been reached during the 2001 summer season. This number does not include the thousands reached through booths at fairs, shows and clinics. More than 7,780 clientele were reached in the summer 2001 season. 45 classes, workshops and presentations were given during this time period. In addition to the direct contacts, the IPM program staff had over 35 media contacts including newspaper articles either written by the staff or resources for media writers, television appearances, and radio interviews. Thousands of publications covering IPM topics have also been distributed this year.

Impact: Quantifiable methods of assessing specific results are being determined.

Source of Federal Funds: Smith-Lever 3b&c, and Smith-Lever 3d IPM

Scope of Impact: State Specific

Nutrient Management

Statement: A soil nutrient sampling project was undertaken to assist Delta District farmers with general fertilizer and herbicide recommendations, as well as to correlate the area Soil and Water Conservation District's soil testing results with those of the university soil-testing lab. The Palmer and Delta Junction Agricultural Agents conducted a fertilizer trial at Kenny Lake investigating sulfur as a limiting nutrient in smooth brome grass hay crops. The Kenny Lake area is set apart from the other farming regions of Alaska and little research has been conducted there. Sulfur is known to be a limiting nutrient in grain and grass production throughout the other regions, but Kenny Lake producers historically had not been applying any sulfur.

At the same time the extension Agents provided a fertilizer workshop for the area producers along with a training session for the use of a soil sampling kit purchased by their local Soil and Water Conservation District. Through this exercise it became obvious that they would not need to be applying lime as had historically been done, thereby reducing production costs.

Several introduced, invasive broadleaf weeds have recently become problematic in grain and forage fields of the Delta Junction area. Generally 2,4-D has been ineffective so herbicide trials are being conducted by the Delta Junction District Agricultural Agent to determine the most effective and least costly options for producers. As part of this trial a sulfonylurea herbicide is being used alone and in several different tank mixtures. Little research has been done investigating the persistence of sulfonylureas in the relatively cool dry soils of Interior Alaska so part of this study will investigate necessary intervals of cropping rotations.

Another herbicide trial being conducted in the Delta Junction area is investigating control of foxtail barley (*Hordeum jubatum*) in smooth brome grass. This particularly insidious weed can significantly impact the quality of pastures and forage crops because of its especially sharp, barbed awns. Currently, good cultural practices such as applying ample fertilizer and mowing prior to the foxtail barely heading out are the extent of a producers options to limit its impact. Finding a selective herbicide to remove one perennial grass from another has proven to be the challenge, but gains are being made.

Impacts: There has already been some reduction of production costs noted for hay growers, but more time is needed to assess other impacts.

Source of Federal Funds: Smith Lever 3b&c

Scope of Impact: Integrated Extension and Research

Pesticide Application

Statement: The Pesticide Applicator Training (PAT) program provided professional pesticide applicator training for Alaskans to be certified / re-certified with the Alaska Department of

Environmental Conservation as restricted or commercial use pesticide applicators. Workshops were conducted in Anchorage, Palmer, Soldotna, Fairbanks, Talkeetna and Nome.

Impact: More than 180 Alaskans were certified or re-certified as pesticide applicators during 2000-01. Quantifiable methods of assessing specific results are being determined.

Source of Federal Funds: USDA / EPA: PAT funds Interagency Agreement

Scope of Impact: State Specific

Natural Resources Management

Statement: The establishment of the Alaska Committee for Noxious and Invasive Plants Management has been a significant development in 2000-01. A Memorandum of Understanding for establishment and support of the committee was formed involving eight federal agencies, twenty state agencies and three private entities. Educational workshops, a resource directory and a draft strategic plan for the management of invasive plants has been developed.

Impact: Quantifiable methods of assessing specific results are being determined.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific

Sustainable Agriculture

In Alaska, Sustainable Agriculture thrives and is the main way of doing business. The typical farm is a small family farm that has found ways to diversify to survive. Because there are few pests in Alaska, farmers have little reliance on pesticides. We are helping to build rural farming communities in places like Nenana, Delta Junction, Point Mackenzie, and Soldotna. The Sustainable Agricultural educational activities include:

- Tours of farms where producers are implementing innovative farming practices.
- Educational programs that build an understanding and reduce reliance on pesticides.
- Network and educate through newsletters. Over 450 ag producers receive the *Sustainable Agriculture for Alaska* newsletter on a quarterly basis.
- Encourage farmers to get more involved in sustainable agricultural practices through grants. \$15,000 was received as SARE Farmer/Rancher Grants in 2001 for Northern Produce Growing Awareness for Consumers and Producers at the Tanana Valley Farmers' Market.

Impact: Quantifiable methods of assessing specific results are being determined. See Web site: <http://www.uaf.edu/coop-ext/SARE/>

Source of Federal Funds: Smith-Lever 3b&c and Special Grant

Scope of Impact: State Specific (some Multistate)

Water Quality

Statement: Alaska Cooperative Extension Service is a partner in a two-year, \$1,000,400 Region 10 (along with Washington, Oregon and Idaho) Extension Water Quality Coordination grant. A team has been formed consisting of water quality coordinators from the four university extension services, an EPA liaison, and the four university water institute directors. Regional issues and tasks include: 1.) Identifying regional clientele and extension training needs for confined animal waste management; 2.) Surveying regional clientele attitudes concerning water quality issues and comparing with past surveys to determine changes and trends; 3.) Surveying water quality training needs for regional extension professionals; and 4.) Creating and distributing a series of regional Riparian Buffer bulletins targeted to specific groups such as recreationists, rural landowners and dry land agriculturists; 5.) Creating a resource manual for extension agents with up-to-date information on domestic water use to assist clientele with household water issues and problems; 6.) Coordinating regional extension activities to the national water quality themes including animal waste management, drinking water and human health, pollution assessment and prevention, watershed management, nutrient and pesticide management, environmental restoration, and water quality policy.

Impacts: Quantifiable methods of assessing specific results are being determined.

Source of Federal Funds: CSREES Special Grant

Scope of Impact: Multistate

Water Quality

Statement: In 2000 the Water Quality instructor for CES and partnering agencies performed work on a grant to help rural villages test traditional water sources for contaminants. It was found that people in these villages frequently drink water that state regulations determine to be unfit for swimming, wading or boating. Educational materials, including specially designed posters were developed and mailed out to over 250 villages and communities in Alaska, and an educational video of the project was released and made available to the public. In 2001, attention was focused on policymakers, working closely with the governor's office and the Alaska Department of Environmental Conservation, to highlight productive ways of spreading messages about simple and effective approaches that can help keep water safe for consumption.

Impact: The recently completed public outreach and policy video project is proving highly popular and has already been used as an Environmental Protection Agency training tool for culturally appropriate educational materials. Copies of the video have been distributed to hundreds of Alaskan communities and more workshops and training are planned with the help of additional EPA and USDA-CSREES Sustainable Development funding. Ongoing work and results will be shared at the Research and Extension Regional Water Quality Conference in 2002 (multistate activity).

Source of Federal Funds: EPA and Smith-Lever 3d Funds, Special Grant

Scope of Impact: State Specific

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.

Executive Summary:

This goal more than any other reaches across the program lines of Cooperative Extension. Cooperation between agents within disciplines and in different disciplines is highlighted in the Key Themes that follow. A few of the highlights resulting for Goal 5 include: During this reporting period 118 planned workshops (more than 700 hours of teaching) were taught by the 4-H, Home Economics and Land Resources faculty, reaching 4,339 Alaskans in 17 communities statewide. Topics included family finance, 4-H youth and leader training, parenting, time management, cold-climate and marine-climate home building, and junior master gardening.

Extension specialists and faculty gave 78 public service presentations reaching 5,748 youth and adults on topics ranging from 4-H shooting sports, leadership training, to fly fishing and animal care. Faculty provided 2,279 hours of consultation time to individuals, agencies and organizations during this reporting period, reaching more than 6,528 clientele on Goal 5 topics that included urban forestry, invasive weeds, pesticide and herbicide issues, and soil and nutrient management. Contacts were made by public presentations, phone calls, e-mails, office and site visits, fairs, meetings with agencies, and audio conferencing.

In this reporting period 17,448 clientele received newsletters, 38 newspaper articles were published, and 7 fact sheets and publications were written by faculty. Thirty minutes of information was delivered via sixty television spots, and 90 radio spots delivered 62 minutes of Extension information.

Indoor Air Quality, taught by the Housing and Energy specialist, continues to be a major program of interest statewide, along with cold- and marine-climate home building. The issue of asthma in children and its relationship to the home environment continues to be a topic of growing community awareness and concern. Thirteen classes and workshops on these topics reached more than 500 clientele in nine communities throughout Alaska. The Housing and Energy Specialist received funding for a third VISTA volunteer to work with him on rural housing issues. The addition of this volunteer to the Housing and Energy program has allowed the expansion of the program, especially through increased collaboration with RurAL CAP and other Alaska native agencies and organizations.

The Housing and Energy Web site has continued to expand, incorporating additional publications, newsletters and current resources for clientele. <<http://www.uaf.edu/coop-ext/faculty/seifert>>

Expenditures and FTEs

| | FY2001 |
|-------------|-----------|
| Federal | \$321,750 |
| State Match | \$321,750 |
| FTE's | 9 |

Key Themes:

Air Quality

Statement: The Alaska Home Economics program was recognized as a regional winner by the National Extension Association of Family and Consumer Science for efforts in teaching Indoor Air Quality throughout the state. This workshop, taught by the energy specialist and facilitated by the District Extension home economists, has been offered in 8 different locations via distance delivery for the past three years. <<http://www.uaf.edu/coop-ext/faculty/seifert>>

Impact: In FY01, workshops reached 500+ clientele in communities throughout Alaska.

Source of Federal Funds: Smith Lever 3b&c

Scope of Impact: State Specific

Children, Youth, and Families at Risk

Statement: As a part of the three-year USDA funded Air Force project, a full time 4-H extension agent was hired at Eielson Air Force Base near Fairbanks. To help youth understand what is happening when a parent is deployed to other locations around the world, the 4-H agent in collaboration with Eielson Family Advocacy and Family Member Services developed "Operation Bug Out", a mock deployment for 3rd through 8th graders. Resembling as close as possible to a real deployment, youth gain a better understanding of what their parents face when they are deployed. In addition to Operation Bug Out, various camps were given which exposed youth to high adventure activities, including ice sculpture, cross-country skiing, snowboarding, hiking, canoeing, dog mushing, and tent camping. Nine mini-camps reached 300+ youth participants.

Impact: As a direct result of this program's successful development and implementation in Alaska, a mock deployment curriculum is being shared with other Air Force bases outside of Alaska. Alaska 4-H extension was key to this creation of a model that establishes liaisons and partnerships with Air Force family advocacy outreach groups. In a time when many agencies are forced to reconsider their programming efforts based on current market trends and budget cuts, the benefits of continued community collaboration and pooling of available resources from all base-helping agencies to effectively meet the needs of military populations without duplicating services represents a newer, smarter way of conducting business, and extension has thus effectively extended itself to previously underserved populations.

Source of Federal Funds: Smith-Lever 3d CYFAR

Scope of Impact: State specific, and Multistate

Estate Planning

Statement: The Extension Home Economist in Fairbanks provided 45 people with training in estate planning. In conjunction with the local Food Bank and an attorney, a workshop was given to outline the essential components of how and why heirs must be provided for, with topics including wills, durable power of attorney, living wills, guardianships and conservators, and inheritance taxes. Because of the popularity of the class, planning is underway to offer the class more frequently in the coming year.

Impact: The home economist and attorney assisted 41 attendees in completing living wills and durable power of attorney forms which were notarized at the training by a Food Bank board member. These two essential pieces of estate planning saved participants \$4,100 in legal fees and set them well on their way to completing their individual estate plans.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State specific

Family Resource Management

Statement: The Women's Financial Information Program was taught by home economists at various locations throughout the state including Anchorage, Palmer, Soldotna/Kenai, Fairbanks, Eielson Air Force Base and Fort Wainwright. Local resource people as well as extension home economists presented sections of the program, including estate planning, money management, investing for retirement, social security and Medicare, resources and financial stability, banking and credit, using financial calculators, time management and family law issues.

Impact: 578 people attended training workshops. Quantifiable methods of assessing specific economic impacts to be determined.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific

Leadership Training and Development

Statement: The 4-H fisheries program, coordinated by the extension 4-H fisheries specialist, was originally designed to increase math and science literacy through fisheries biology in ten rural schools. The program now serves students and teachers in more than 70 rural communities, and the hands-on learning from rearing salmon eggs into fry with in-classroom incubators to stream habitat surveys, has yielded far more than higher math and science scores. Students and teachers alike have experienced a deeper appreciation and understanding of what it means to be good landlords of the fisheries resource.

Impact: 70+ rural communities in 31 school districts (more than 1650 students) were enriched with the fisheries program in rural schools this past fiscal year. The program has gained wide recognition and support throughout the state. Higher math and science scores among rural students are only one invaluable dividend of this successful program. There is no price that can be put on the potential of empowering youth with the tools of knowledge and technical literacy and building their capacity of self-determination.

Source of Federal Funds: Smith-Lever 3d CYFAR

Scope of Impact: State Specific

Parenting

Statement: The Anchorage home economist helped coordinate volunteer efforts by 16 members of the Anchorage Council for Family and Community Education (FCE), an organization in partnership with the Cooperative Extension Service, to prepare and distribute Raise-A-Reader packets to parents of newborns in all four hospitals in the Anchorage district. The packets contained baby's first book and information on the importance of reading to children. Materials for packets were made possible by outside financial donations received from businesses in support of this program.

Impact: 4,000 parents of newborns in all four hospitals in the Anchorage District received Raise-A-Reader packets during the 2000-01 fiscal year.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific

Promoting Housing Programs

Statement: For more than 10 years, a focal effort of the Energy and Housing Program of Cooperative Extension Service has been delivery of courses to the home buying public, enabling them to become better quality housing consumers. The courses are customized to various regions of Alaska and are commonly referred to as the Cold Climate Homebuilding and Marine Climate Homebuilding courses. Over the past 10 years, extension has perfected course delivery, such that it is about seven hours long and extremely customized to various locations around the state. Over those same 10 years, more than 3,000 people have taken this course. Many of them end up financing their homes through the Energy Rated Homes Program and get an energy mortgage incentive. This saves them a lot of money, enhances the quality of the homes and the housing stock used, and consequently, improves the health of the inhabitants of their homes. This continues to be a major thrust and a major benefit of extension to the state of Alaska exemplifying the application of university-based research to unique Alaska housing challenges in ventilation, heating systems, insulation performance, moisture control and radon reduction.

Impact: The impact of these efforts is enormous in Alaska. Just the savings in interest and finance costs, let alone the benefits to the health and well-being of people living in these healthier more durable houses, can be as much as \$10,000 per home over the life of a mortgage. This can be demonstrated by the savings of 1 percent or more on an interest rate over the life of a

mortgage. On a larger scale, this means the fiscal cost of saving \$10,000 on 3,000 home mortgage purchases is on the order of \$30 million. Of course, this is a low-end estimate because the savings may be more, and the number of houses affected may be greater. Each year this tally is increased by the number of individuals who take the course in anticipation of buying new homes and who finance through mortgage incentive programs.

Source of Federal Funds: Partly Smith-Lever 3b&c (but majority of funds from the Alaska Housing Finance Corporation and the U.S. Dept. of Energy)

Scope of Impact: State specific

Workforce Preparation

Statement: Basic budgeting and money management classes for pre-release prison inmates continue to be taught, teaching them to plan ahead, about goal setting, tracking spending, causes of family financial conflict and getting organized. Prerelease inmates are helped to create a spending and savings plan based on the income they will realistically earn after being released. The courses are taught by the extension home economist with the support of the education coordinator at the Wildwood Correctional Facility in Kenai, using the extension series, "Getting Organized."

Impact: In FY01, 54 prerelease inmates were instructed in financial management. Feedback from those taught indicates this training is highly valued and will be utilized after release from prison.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific

Youth Development / 4-H

Statement: Alaska 4-H served more than 15,000 youth in 2001, aged kindergarten through eighteen. Volunteers working with 4-H youth who provided an average of 48 hours a year numbered 400, which is an important part of making the projects, camps and community service activities possible.

Impact: With only 8 faculty in the state of Alaska for 4-H, volunteers are integral to having a successful 4-H program. Their dedicated service is worth in excess of \$249,600, were they to be paid for their labor.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State Specific

Youth Development / 4-H

Statement: The Junior Master Gardener program in Alaska is part of a new national program and innovative youth gardening project modeled after the highly popular Master Gardener program. JMG offers horticulture and environmental science education through fun and creative

activities and introduces young gardeners to the art and science of gardening. The program helps youth develop leadership and life skills to become good citizens within their communities, schools and families. Forty students were trained as junior master gardeners in the spring of 2001.

Impact: Quantifiable methods of assessing specific areas of effectiveness are being determined.

Source of Federal Funds: Smith-Lever 3b&c

Scope of Impact: State specific.

II. Stakeholder Input Process

Extension State Advisory Council:

The purpose and composition of extension's state advisory council has been readdressed this past year to emphasize and maximize stakeholder input in to the planning and budgeting process of CES and to assist in developing program direction and priorities. Council membership has been revised to represent concurrent geographic and stakeholder areas of Alaska as well as linking their representation with CES Plan of Work national goals. The current membership list is published on the Alaska CES Web site: www.uaf.edu/coop-ext.

Outcomes-based Reporting:

Progress is being made to consistently gather stakeholder input from program workshops and activities, annual conferences and district advisory councils. Information on the use of the Logic Model program-planning tool has been shared with each program area of extension in Alaska, and efforts are underway to begin incorporating this planning within the main program areas of extension (land resources, home economics and 4-H). Faculty have met in program planning sessions and efforts are underway to incorporate effective means for identifying and reporting program impacts. Time to implement these plans is needed before the results are readily available in this new format.

III. Program Review Process (Merit Review)

Alaska Cooperative Extension Service has benefited from significant feedback gathered from the 2001 CSREES and Partners Alaska Tour that took place in August 2001. Special guests from CSREES administration, Oregon State University, the University of Hawaii, Washington State University, and U.S. Sen. Stevens' office attended. The goals of the tour included developing an understanding of the unique challenges of Alaskan research and extension education programming, identifying viable areas of future multistate collaboration, providing an overview of current integrated projects and newly planned projects related to Higher Ed and New Crop opportunities.

Internal stakeholder review has been facilitated by the broadened outreach and representation of our statewide advisory council membership. Program goals are being

addressed by the council membership, and the role of the state advisory council continues to expand to include areas of program planning for extension.

IV. Evaluation of the Success of Multi and Joint Activities

Stakeholder inputs have questioned the importance of multistate research to Alaska's needs. Specifically they point out the relative development of Alaska agriculture compared to most western states. Unlike other small population states in the west such as Wyoming, we have no nearby markets in other more populated states. This coupled with extreme differences in environmental and economic climate found in other states has been a factor in Alaska's limited participation in multistate research. Many of the multistate technical committees do not address the range of research our faculty is pursuing. Exceptions include W-112 and W-147. However, the relative isolation of our faculty would argue for more collaboration with scientists, agents and specialists from other regions. A clear example is our controlled environment horticulturist. Through involvement in NCR-101, she has developed collaborative projects with Cornell University and University of Minnesota which has led to funding opportunities that were not previously available to her. We will encourage our scientists, particularly young faculty to pursue these opportunities.

Alaska Extension agents and specialists participated in two multistate technical committee annual meetings hosted by AFES/SALRM in 2001. They included:

W-112 "Reproductive Performance in Domestic Ruminants" June 7-8, 2001 in Fairbanks, AK.

W-147 "Managing Plant-Microbe Interaction in Soils to Promote Sustainable Agriculture" December 7-8, 2001 Fairbanks, AK.

Diversified livestock interest in our state has brought pressure on our animal scientist to broaden his program to include species that may not be of interest at lower latitudes (i.e. reindeer and muskox). However, research contributions will continue to focus on W-112 objective 2) Improve reproductive efficiency through development of technologies and systems to control estrous activities, conception, and fetal/neonatal survival.

Activities within W-112 address specific reproductive problems that exist in Alaska.

Alaska is participating with ID, WY, and TX to study detection of interferon induced genes during the post-breeding period in reindeer, muskox, and elk.

With TX to develop infrared system to investigate antler growth and quality in reindeer and elk.

With NM to examine thyroid hormones in muskox at the onset of the breeding system

With OH to develop estrous synchronization protocols for muskox.

With TX to determine the relationship between IGF-1, calving, and antler casting and regrowth in female reindeer and caribou.

With WY to develop estradiol and progesterone assays in muskox and reindeer plasma

As producers begin to see direct results from multistate activities and have access to research finding from other states, we feel they will come around to acknowledge the importance of multistate participation by our scientists. Among the underserved populations that may benefit from multistate research is the Alaska Native reindeer herders in remote villages. One study being performed under the aegis of W-112 is related to the reindeer cow estrous activity and the impact of presence of male reindeer in that cycle. Research of this type is unique to this region and would not have been initiated without our participation in W-112. This program is also an Integrated Activity with Cooperative Extension. The member scientist has a split appointment with Cooperative Extension and through Integrated Multistate involvement he brings back information that is disseminated in one-on-one contacts as well as sharing the information with CES agents throughout Alaska. The Alternative Livestock Producers Conference held in October of 2000 was attended by over 50 attendees targeted the educational needs of producers. This feedback will be invaluable to continued participation in W-112.

Alaska extension's forestry specialist is successfully collaborating with the University of Kentucky on forestry education programs, as well as with the North Carolina State University on programming for woodlot management. Fairbanks, Delta Junction, and Kenai Peninsula land resources agents have linked multistate efforts to invasive pest management, particularly of noxious weeds and invasive plants. Collaboration on the international level by the Kenai Peninsula land resources agent and the livestock specialist has led to the promising adaptation of circumpolar sustainable agriculture. In particular, the successful adaptation of Norwegian "Apelsvoll" orchardgrass to the Alaska hay market continues to be evaluated and developed in cooperation with Dr. Arild Larsen of the Norwegian Crop Research Institute, Vgones Research Station, Norway. The acceptance of this new cultivar by a variety of livestock fed "Apelsvoll," has been extremely encouraging.

Contrary to stakeholder concerns, Alaska's relative isolation argues in favor of participation in multistate research and extension activities. Our faculty can benefit greatly from collaborative efforts with scientists and agents and specialists from other states. Literature review is important to guard against "reinventing the wheel"; however, the value of meeting face-to-face and participating in discussion of common research goals cannot be overemphasized.

V. Integrated Research and Extension Activities

Alaska submitted Form CSREES-Waiver requesting a waiver for FY2000 Integrated Activities from Smith-Lever Act Funds. CSREES granted the waiver and approved our projected Integrated Activities for the 2001-2004. The form CSREES-REPT reporting Integrated Activities for 2001 is included here.

The projections for Integrated Activities for 2001-2004 were based on the Supplement to the Plan of Work submitted to CSREES July 28, 2000. Despite the waiver, we moved ahead with Integrated Activities involving AFES researchers and support staff and CES specialists and agents. An evaluation and brief synopsis of those activities for FY2001 are summarized below:

The SALRM/AFES Palmer Research Center in southcentral Alaska became the Palmer Research and Extension Center in 2001. In addition to housing two split AFES/CES faculty positions in

horticulture and agronomy, the Center also provided office facilities for the CES water quality program and the Fisheries and Natural Resources specialist. This is but one example of increased collaboration among research, teaching and extension faculty. Our goal is to increase Integrated Activities to the AREERA target percentage.

Agronomic Crops and Soils

Integrated activities centered around best management practices for production of livestock feed crops, primarily forages and small grains as well as investigating new crop opportunities. AFES researchers and CES specialists and agents continued collaborative work at Delta Junction, Point McKenzie, and the Kenai Peninsula. The extension agronomy specialist (75% CES and 25% AFES) cooperated with AFES researchers as co-P.I. on three USDA-funded projects (“Production and Harvest of Quality Forage Products at Northern Latitudes”, Hatch funded; “No-Till Forage Establishment to Improve Soil and Water Conservation”, SARE funded; and “Dairy Research at Northern Latitudes”, USDA Special Grant). We evaluated new and traditional grass and legume forages for yield, quality, and adaptability to climatic conditions in interior and southcentral Alaska, tillage practices for forage establishment, optimum soil management for soil chemical and physical health and quality. Details of this research are summarized under the appropriate Key Theme. Both AFES researchers and CES specialist and agents disseminated products of this applied research at workshops and the annual Delta Farm Forum and Agriculture Symposium. Additionally, CES and AFES jointly sponsored a Forage Workshop in March of 2002 attended by 77 producers and agency personnel.

Potato and Vegetable Crops

AFES researchers and CES counterparts carried out applied research, demonstration, and outreach activities primarily related to variety selection, disease control and management, and weed control. Much of this work is conducted in, but not limited to, southcentral Alaska where approximately 78% of the statewide value of production of potatoes and vegetables reside. Two horticulture/plant pathology researchers at the Palmer Research Center working closely with CES agents in Palmer, Anchorage, Soldotna, Fairbanks, and Delta Junction provide the core for this working group. Our new horticulture researcher has developed a Hatch project “Cultivar Selection, Production Methods, and Market Quality of Vegetables in Alaska” that was recently approved by CSREES. That position carries a 25% CES appointment and is performing applied research and on-farm demonstration for wide range of vegetable crops both traditional and new crop opportunities including specialty greens. This information is presented annually to CES/AFES jointly sponsored workshops. Other AFES/CES collaborative work included potato late blight monitoring and treatment which assisted in controlling an outbreak in 1998 to blight-free fields in 2000 and 2001. Expensive fungicide treatments in 1998 and 1999 progressed to no treatments required in 2000 or 2001 due in large part to the monitoring program. Outreach included a joint AFES/CES publication on late blight control and presentation of research results at the joint CES/AFES Potato Growers Conference and Vegetable Growers Conference.

Greenhouse Management/Nursery

Collaborative work continued in the greenhouse/nursery production of cut flowers, bedding plants, ornamentals, and other landscaping plants. Research and outreach continued to address physiological response to light, day length, and temperature in controlled environments for species that included cyclamen, dwarf carnations, forget-me-nots, and selected food crops including raspberries. Research and demonstration efforts at the Georgeson Botanical Gardens evaluated woody perennials, herbaceous perennials, annual flowers, herbs and vegetables for survival and productivity at northern latitudes. The latter had a high degree of volunteer and extension involvement. Outreach efforts have included one-on-one contacts with growers and the public, presentations at CES workshops, master gardener program, and the annual CES/AFES Alaska Greenhouse and Nursery Conference (i.e. “Greenhouse Flower Production for Local Markets”), and lay publications including “Annual Flower Plant Evaluations”, “Georgeson Botanical Garden Review”, “Alaska Spinach, Savory, Succulent, Salad Selection” to name a few.

Reindeer Production

Alaska native reindeer herders have managed herds totaling over 30,000 deer. Those numbers have dropped significantly in recent years from out-migration of deer joining migratory caribou. AFES scientists continued to carry out a number of research and demonstration projects in cooperation with the CES reindeer agent on the Seward Peninsula (due to funding shortfalls, CES has split the land resource agent’s appointment between the Seward Peninsula and Palmer). Current projects range from reproduction and disease management to range management and reindeer nutrition. The extension reindeer agent is acting as the liaison between the researchers, agencies (i.e. NRCS, AFG, and BIA), and the herders themselves and facilitates annual meetings and workshops.

Animal Reproduction

The research animal scientist/livestock split position (CES, 51%; AFES, 49%) addressed reproductive performance of ruminant animals under the aegis of multistate research (W-112) which addresses both traditional and alternative animal species. Research and demonstration collaboration included silent ovulation detection in dairy cows, reindeer bull management effects on reproductive physiology of reindeer cows, and estrus synchronization in dairy and beef. Most of this research was on-farm, directly involving the local extension agents and the producers. Outreach activities included one-on-one contacts with producers, workshop presentations at the Delta Farm Forum, the Agricultural Symposium, and the development and hosting of the Alternative Livestock Conference. This relatively new project should prove to be the cornerstone of our Integrated Activities with Cooperative Extension. It encompasses all the desirable elements of a multistate, integrated research and extension activities.

Forest Production/Protection

Alaska Cooperative Extension Service has a forestry specialist and a land resources chair who work cooperatively with AFES researchers both in applied research, demonstration, and dissemination of information on issues related to growth and yield, and value-added production.

Community and Rural Development

AFES' resource planning researcher cooperated with CES land resource specialists and are developing a database of planning cases in Alaska. A literature review of criteria for effectiveness in resources planning and environmental dispute resolution was completed.

Extension agents and a rural development specialist have been working together with several village councils for bush communities and state agencies to address issues of water quality and safe drinking water, as well as issues pertaining to sustainable economic development.

Attachments to the Annual Report of Accomplishments and Results

1. Certification Letter (Electronic copy with signed hard copy to follow.)
2. Form CSREES-REPT (2001): Multistate Extension Activities (Electronic copy with hard copy to follow.)
3. Form CSREES-REPT (2001): Integrated Activities (Smith-Lever Act Funds) (Electronic copy with hard copy to follow.)
4. Supplement to ACE Plan of Work with Waiver, Base and Target Percentages Forms (July 28, 2000) Hard copies to follow.
5. Report: 2001 Extension in Review (for Alaska Cooperative Extension Service; to follow by hard copy.)